MHC-3700

SERVICE MANUAL

AEP Model
UK Model

- MHC-3700 is composed of following models. As for the service manual, it is issured for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-3700

AMPLIFIER	6099	TA-H3700	2/29/15/5
CD PLAYER	V-13733	CDP-H3700	1/22/17/3
TUNER	5982	ST-H3700	2/23/16/M
CASSETTE DECK	6044	TC-H3700	2/12/11/3
SPEAKER SYSTEM	6005	SS-H3700	

SPECIFICATIONS

Power requirements
AEP, G, IT model:
220V—230V, 50/60 Hz
UK model: 240V, 50Hz
Power consumption AEP, G, IT model: 140 watts
UK model: 310 watts
Dimensions Approx. 225 x 365 x 275 mm (w/h/d)
($8^7/_8$ x $14^3/_8$ x $10^7/_8$ inches)
incl. projecting parts and controls
Weight Approx. 10.5 kg (24 lb 3 oz)
Supplied accessories
Remote Commander (1)
Sony SUM-3 (NS) batteries (2)
AM loop antenna (1)
FM antenna (1)
AC power cord (1)
Flat cord (2)

Design and specifications subject to change without notice.

- G : Germany model
- IT : Italian model

PARTS LIST

[illegible]s marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		******************************	
	1-501-369-11	ANTENNA	
	1-501-374-11	ANTENNA, LOOP	
⚠	1-558-032-11	CORD, POWER (UK)	
⚠	1-575-131-11	CORD, POWER (AEP, G, IT)	
	1-574-927-21	CORD (WITH CONNECTOR) (TA-ST)	
	1-590-870-11	CORD (WITH CONNECTOR) (TA-TC-CD)	
	1-693-085-11	REMOTE COMMANDER (RM-S470)	
*	3-378-785-01	CUSHION (FRONT) (TC)	
*	3-378-786-01	CUSHION (REAR) (TC)	
	3-694-922-01	SHEET, PROTECTION (SS)	
	3-754-882-11	MANUAL, INSTRUCTION (ENGLISH, SWEDISH, ITALIAN, DANISH, FINNISH) (AEP, IT)	
	3-754-882-41	MANUAL, INSTRUCTION (FRENCH, SPANISH, PORTUGUESE, DUTCH, GERMAN) (AEP)	
	3-754-882-51	MANUAL, INSTRUCTION (ENGLISH, GERMAN) (UK, G)	
	4-910-323-01	SHEET, PROTECTION (TC)	
	4-920-941-01	SHEET (B), PROTECTION (CDP)	
*	4-945-075-01	CUSHION (RIGHT) (TA)	
*	4-945-076-01	CUSHION (LEFT) (TA)	
*	4-945-080-01	CUSHION (SS)	
*	4-951-877-01	CUSHION (CDP, ST)	
*	4-952-427-01	INDIVIDUAL CARTON (TA, TC, CDP) (AEP, UK)	
*	4-952-430-01	INDIVIDUAL CARTON (SS)	
*	4-952-433-01	INDIVIDUAL CARTON (TA, TC, CDP) (AEP, IT, G)	

MINI Hi-Fi COMPONENT SYSTEM

SONY®

MICROFILM

9-957-002-11

Sony Corporation
Audio Group

English
92C0460-1
Printed in Japan
© 1992. 3

Published by Customer Relations and Service Group

TA-H3700

SERVICE MANUAL

AEP Model
UK Model

SONY
VOLUME
MHC-3700
TOTAL EFFECT CONTROL
MIN
MAX
FUNCTION
+

This set is the Amplifier section in MHC-3700.

SPECIFICATIONS

Continuous RMS power output	For satellite speaker: 23 + 23 watts (8 ohms at 1 kHz, DIN) 28 + 28 watts (8 ohms at 1 kHz, 5% THD) For bass speaker: 27 + 27 watts (6 ohms at 110 Hz, DIN) 32 + 32 watts (6 ohms at 110 Hz, 5% THD)
Music power output	For satellite speaker: 40 + 40 watts (8 ohms at 1 kHz, 10% THD) For bass speaker: 45 + 45 watts (6 ohms at 110 Hz, 10% THD)
Outputs	HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more. SPEAKER (SATELLITE): accepts speakers of 8 to 16 ohms. SPEAKER (BASS): accepts speaker of 6 to 16 ohms.

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

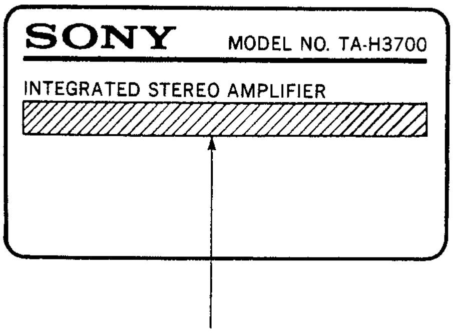
MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY®

MODEL IDENTIFICATION

—Model Number Label—



AEP model : AC: 220—230V~50/60Hz
Italian model : AC: 220—230V~50Hz
Germany model: SYSTEM MHC-3700
AC: 220—230~50Hz
UK model : AC: 240V~50Hz

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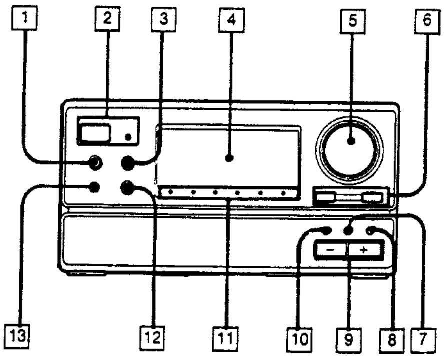
* * *

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION

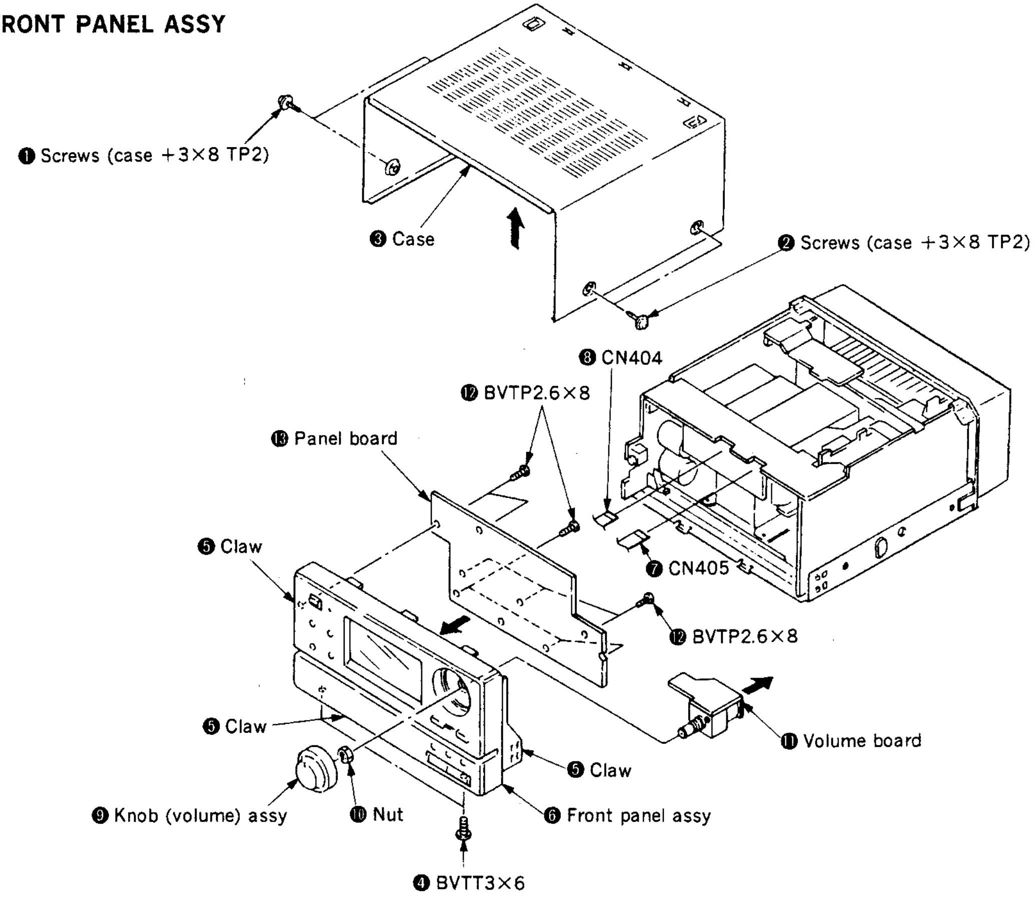
1 WAKE UP VOL SET button and indicator (108)
2 SYSTEM POWER switch and STANDBY indicator
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
3 DISPLAY button (66)
4 Display window
5 VOLUME control ㉔
6 FUNCTION <> buttons ⑱
7 T.P.O. button (64)
8 DIRECT button (66)
9 TOTAL EFFECT CONTROL –/+ buttons (68)
10 MUSIC button (64)
11 Function indicators
12 MUTING button ㉔
13 HEADPHONES jack (stereo minijack) ㉔



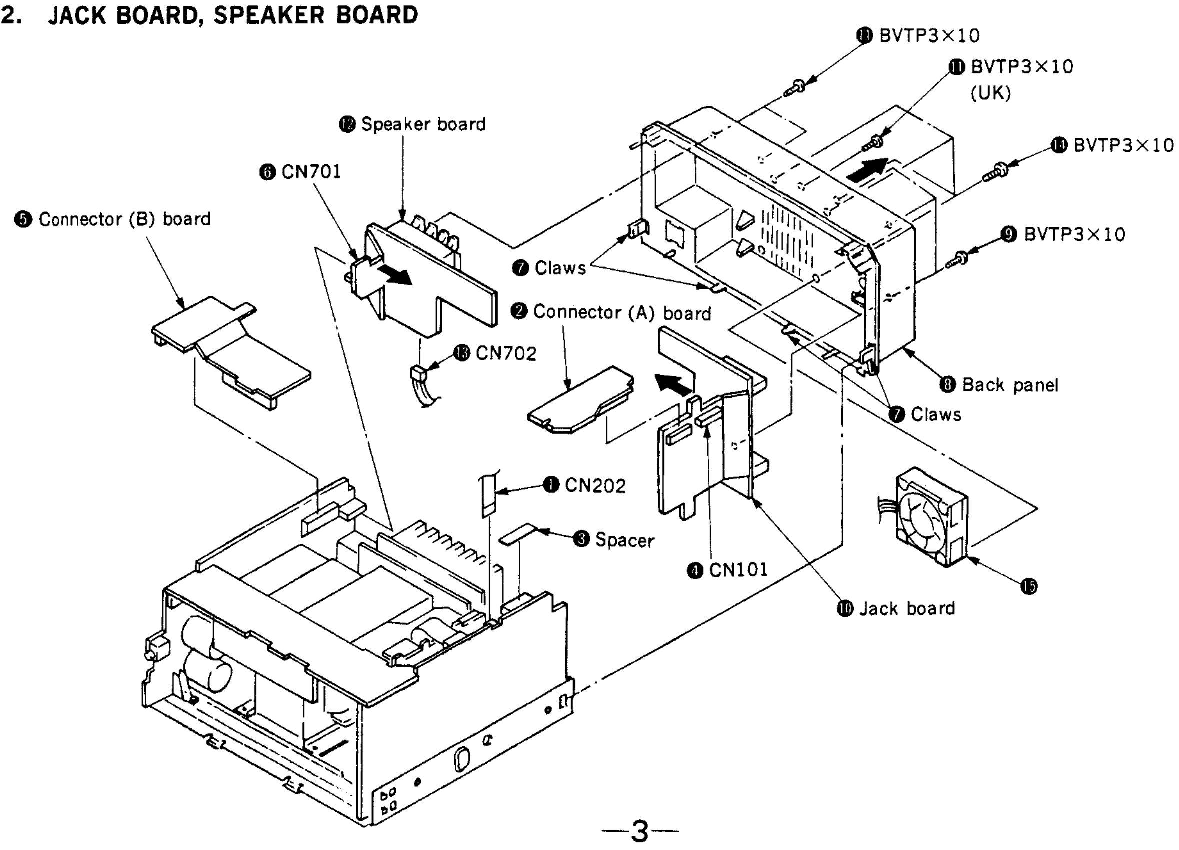
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

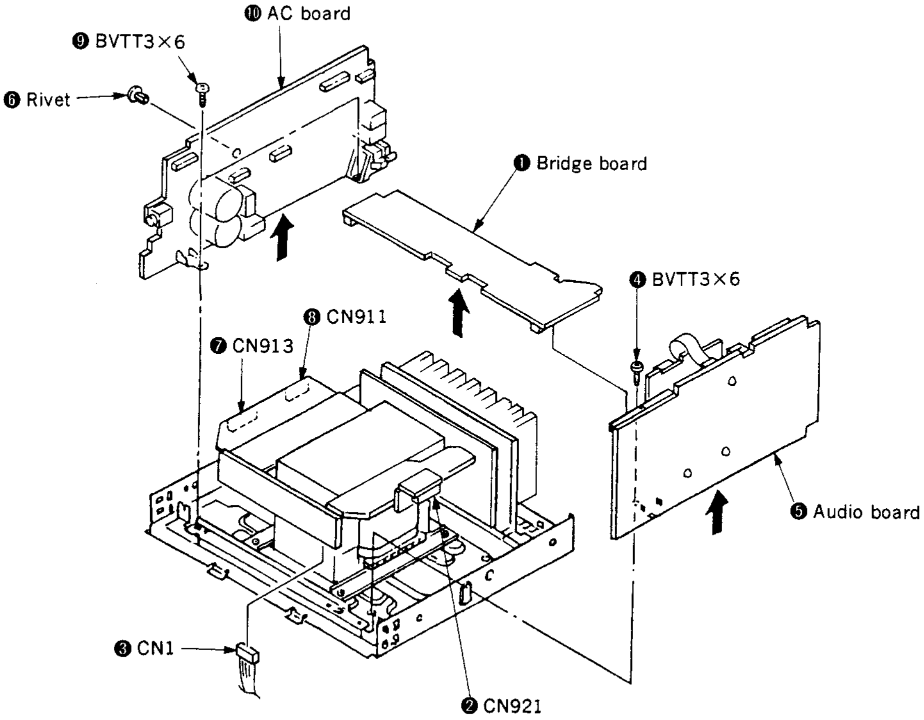
2-1. FRONT PANEL ASSY


❶ Screws (case +3×8 TP2)
❸ Case
❷ Screws (case +3×8 TP2)
❽ CN404
⓬ BVTP2.6×8
⓭ Panel board
❺ Claw
❼ CN405
⓬ BVTP2.6×8
❺ Claw
⓫ Volume board
❺ Claw
❾ Knob (volume) assy
❿ Nut
❻ Front panel assy
❹ BVTT3×6

2-2. JACK BOARD, SPEAKER BOARD

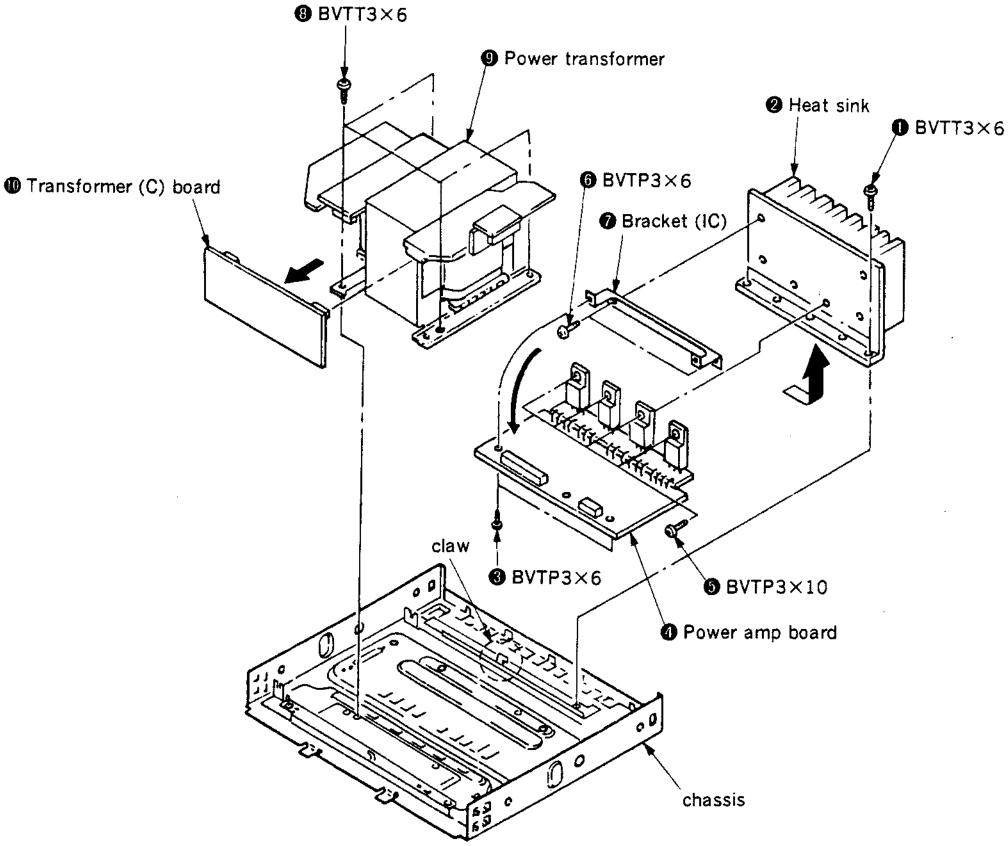

⓫ BVTP3×10
⓫ BVTP3×10
(UK)
⓬ Speaker board
⓮ BVTP3×10
❻ CN701
❺ Connector (B) board
❾ BVTP3×10
❼ Claws
❷ Connector (A) board
⓭ CN702
❽ Back panel
❼ Claws
❶ CN202
❸ Spacer
❹ CN101
⓯
❿ Jack board

2-3. AUDIO BOARD, AC BOARD



⑩ AC board
⑨ BVTT3×6
⑥ Rivet
① Bridge board
④ BVTT3×6
⑧ CN911
⑦ CN913
⑤ Audio board
③ CN1
② CN921

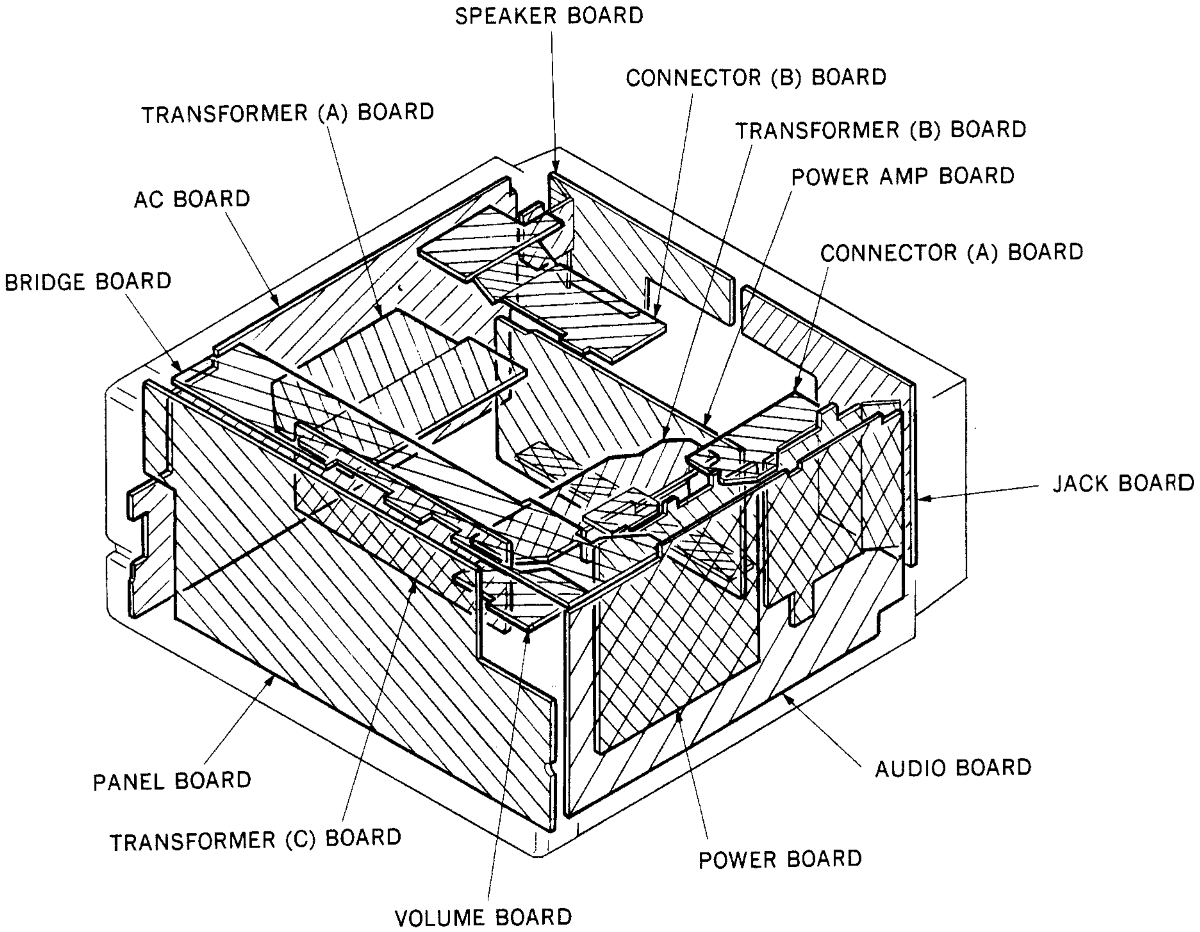
2-4. POWER AMP BOARD, POWER TRANSFORMER



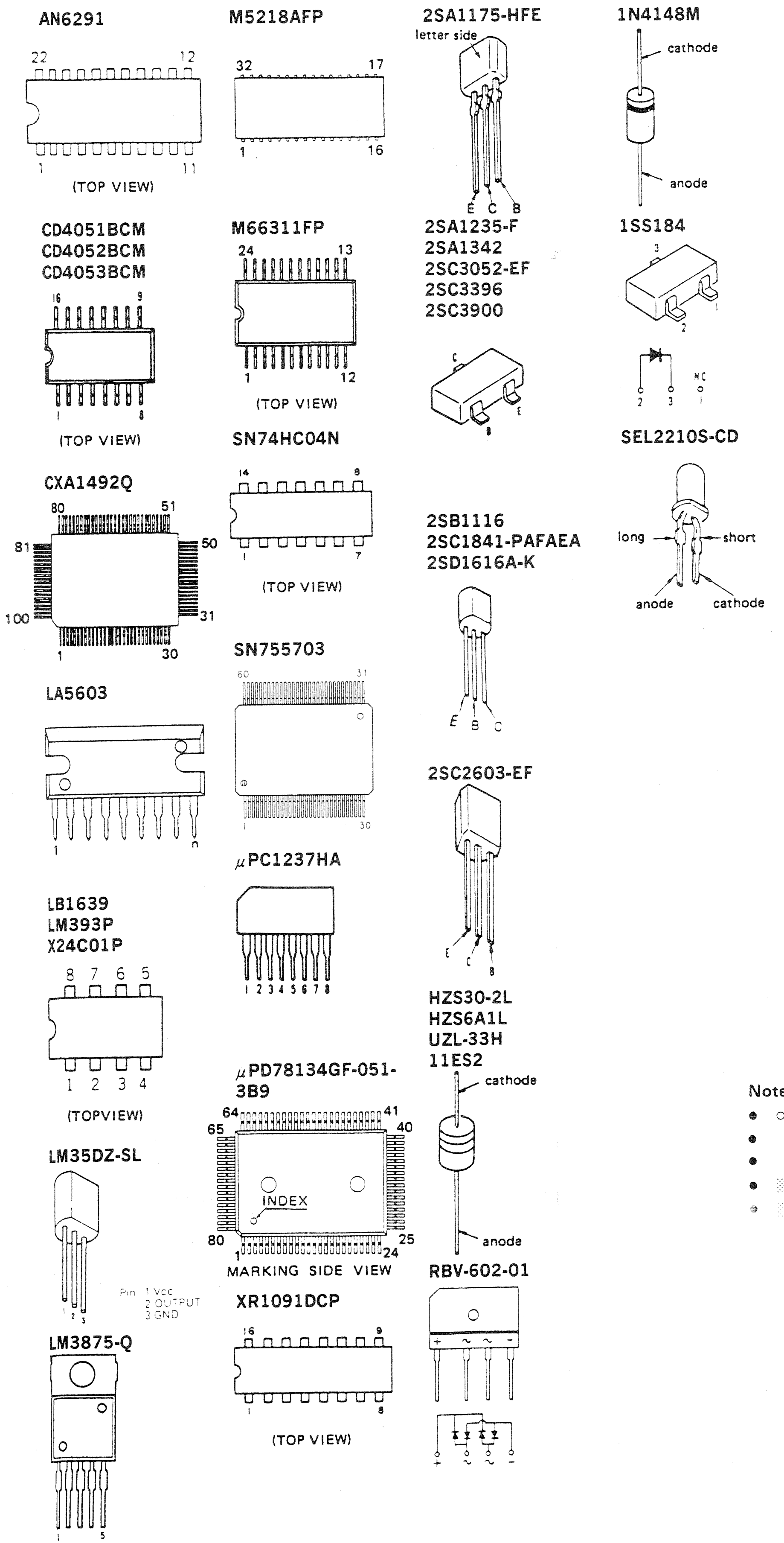
⑧ BVTT3×6
⑨ Power transformer
② Heat sink
① BVTT3×6
⑩ Transformer (C) board
⑥ BVTP3×6
⑦ Bracket (IC)
claw
③ BVTP3×6
⑤ BVTP3×10
④ Power amp board
chassis

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION


SPEAKER BOARD
CONNECTOR (B) BOARD
TRANSFORMER (A) BOARD
TRANSFORMER (B) BOARD
POWER AMP BOARD
AC BOARD
CONNECTOR (A) BOARD
BRIDGE BOARD
JACK BOARD
PANEL BOARD
AUDIO BOARD
TRANSFORMER (C) BOARD
POWER BOARD
VOLUME BOARD

3-2. SEMICONDUCTOR LEAD LAYOUTS

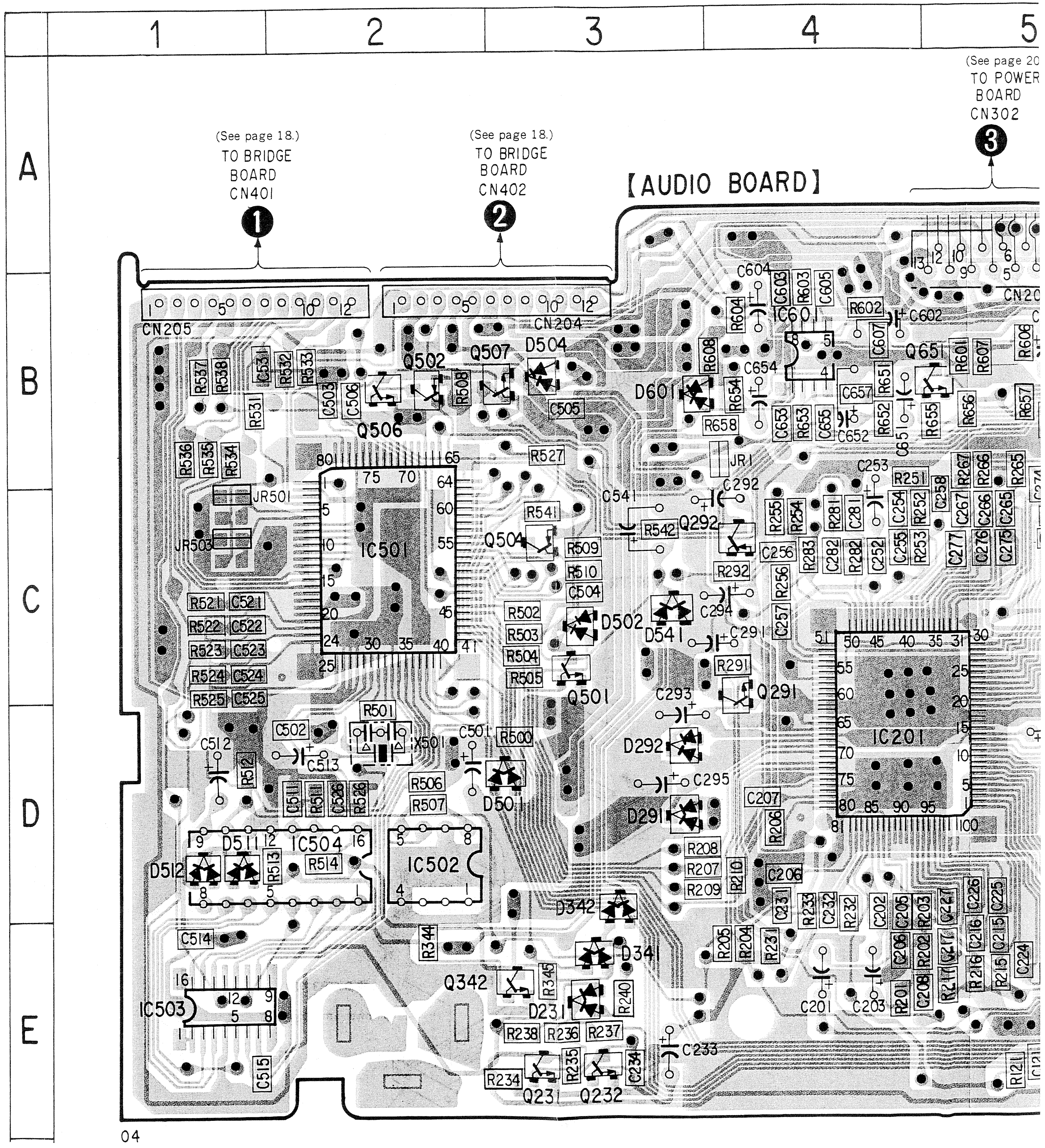

AN6291
22
12
1
11
(TOP VIEW)
M5218AFP
32
17
1
16
2SA1175-HFE
letter side
E C B
1N4148M
cathode
anode
CD4051BCM
CD4052BCM
CD4053BCM
16
9
1
8
(TOP VIEW)
M66311FP
24
13
1
12
(TOP VIEW)
2SA1235-F
2SA1342
2SC3052-EF
2SC3396
2SC3900
1SS184
SN74HC04N
14
8
1
7
(TOP VIEW)
SEL2210S-CD
long
short
anode
cathode
CXA1492Q
80
51
81
50
100
31
1
30
2SB1116
2SC1841-PAFAEA
2SD1616A-K
E B C
LA5603
SN755703
60
31
1
30
2SC2603-EF
E C B
μPC1237HA
1 2 3 4 5 6 7 8
LB1639
LM393P
X24C01P
8 7 6 5
1 2 3 4
(TOPVIEW)
HZS30-2L
HZS6A1L
UZL-33H
11ES2
cathode
anode
μPD78134GF-051-3B9
64
41
65
40
INDEX
80
25
1
24
MARKING SIDE VIEW
LM35DZ-SL
Pin 1 Vcc
2 OUTPUT
3 GND
1 2 3
XR1091DCP
16
9
1
8
(TOP VIEW)
RBV-602-01
LM3875-Q
1
5

• Semiconductor Location

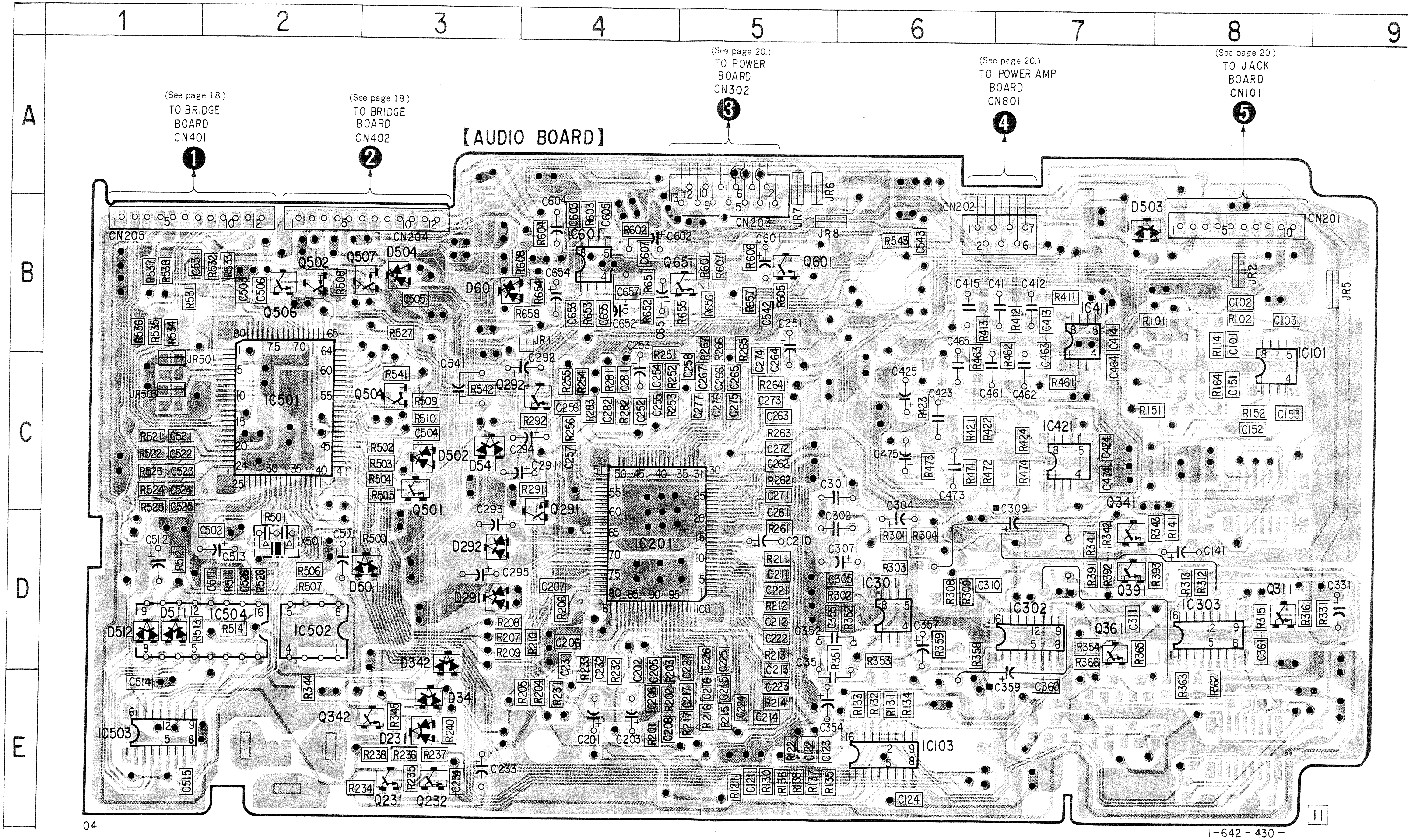
Ref. No.	Location
D231	E-3
D291	D-3
D292	D-3
D341	E-3
D342	D-3
D501	D-3
D502	C-3
D503	B-7
D504	B-3
D511	D-1
D512	D-1
D541	C-3
D601	B-3
IC101	B-8
IC103	E-6
IC201	D-4
IC301	D-6
IC302	D-7
IC303	D-8
IC411	B-7
IC421	C-7
IC501	C-2
IC502	D-2
IC503	E-1
IC504	D-2
IC601	B-4
Q231	E-3
Q232	E-3
Q291	C-4
Q292	C-4
Q311	D-8
Q341	D-7
Q342	E-3
Q361	D-7
Q391	D-7
Q501	C-3
Q502	B-2
Q504	C-3
Q506	B-2
Q507	B-3
Q601	B-5
Q651	B-5

Note:
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

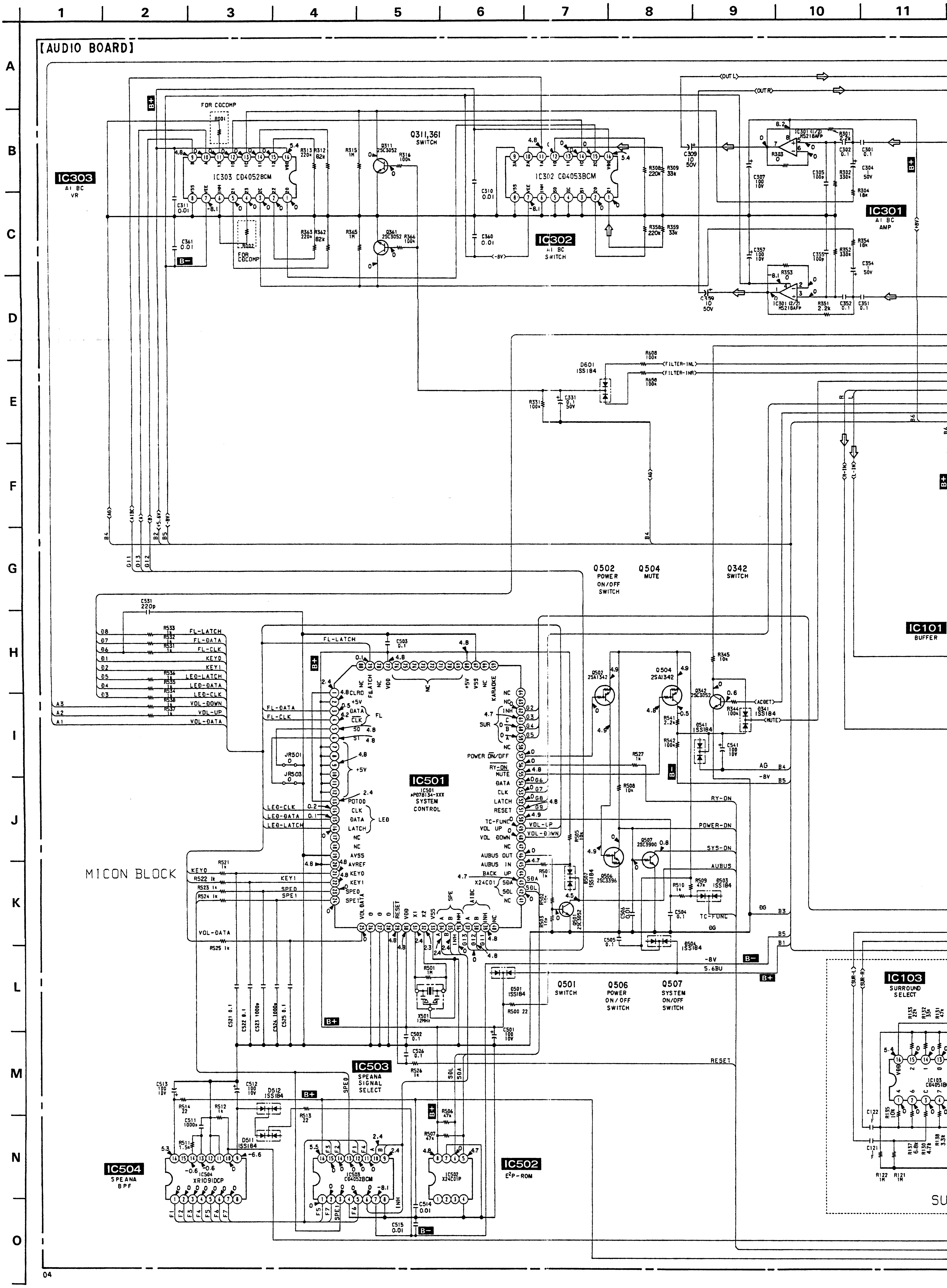
3-3. PRINTED WIRING BOARD—AUDIO SECTION—

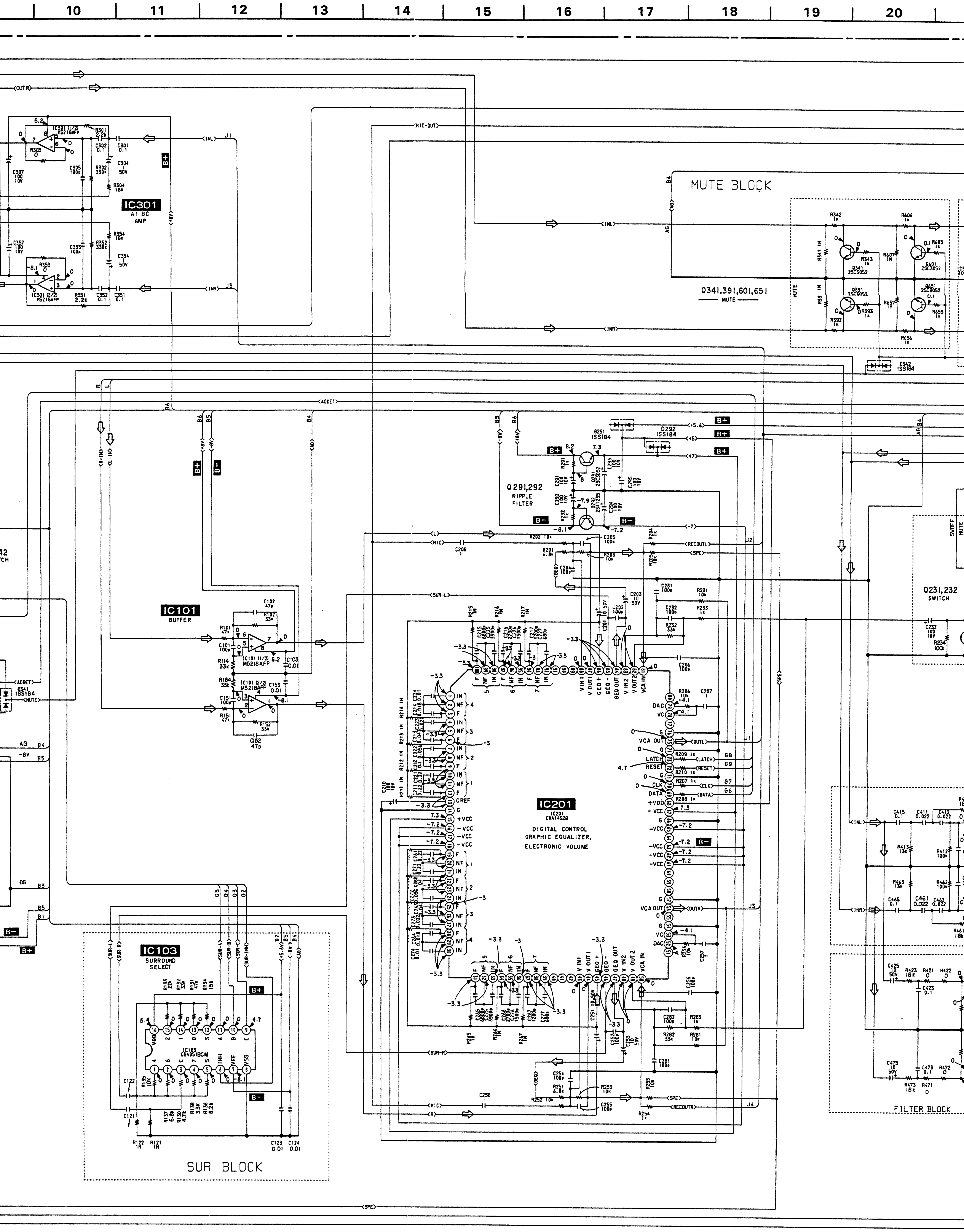

1
2
3
4
5
A
B
C
D
E
(See page 18.)
TO BRIDGE
BOARD
CN401
❶
(See page 18.)
TO BRIDGE
BOARD
CN402
❷
(See page 20
TO POWER
BOARD
CN302
❸
【AUDIO BOARD】
CN205
CN204
IC501
IC201
IC502
IC503
IC504
IC601
Q502
Q506
Q507
Q504
Q501
Q292
Q291
Q342
Q231
Q232
Q651
D504
D601
D502
D541
D501
D292
D291
D342
D341
D231
D511
D512
X501
JR501
JR503
JR1
04

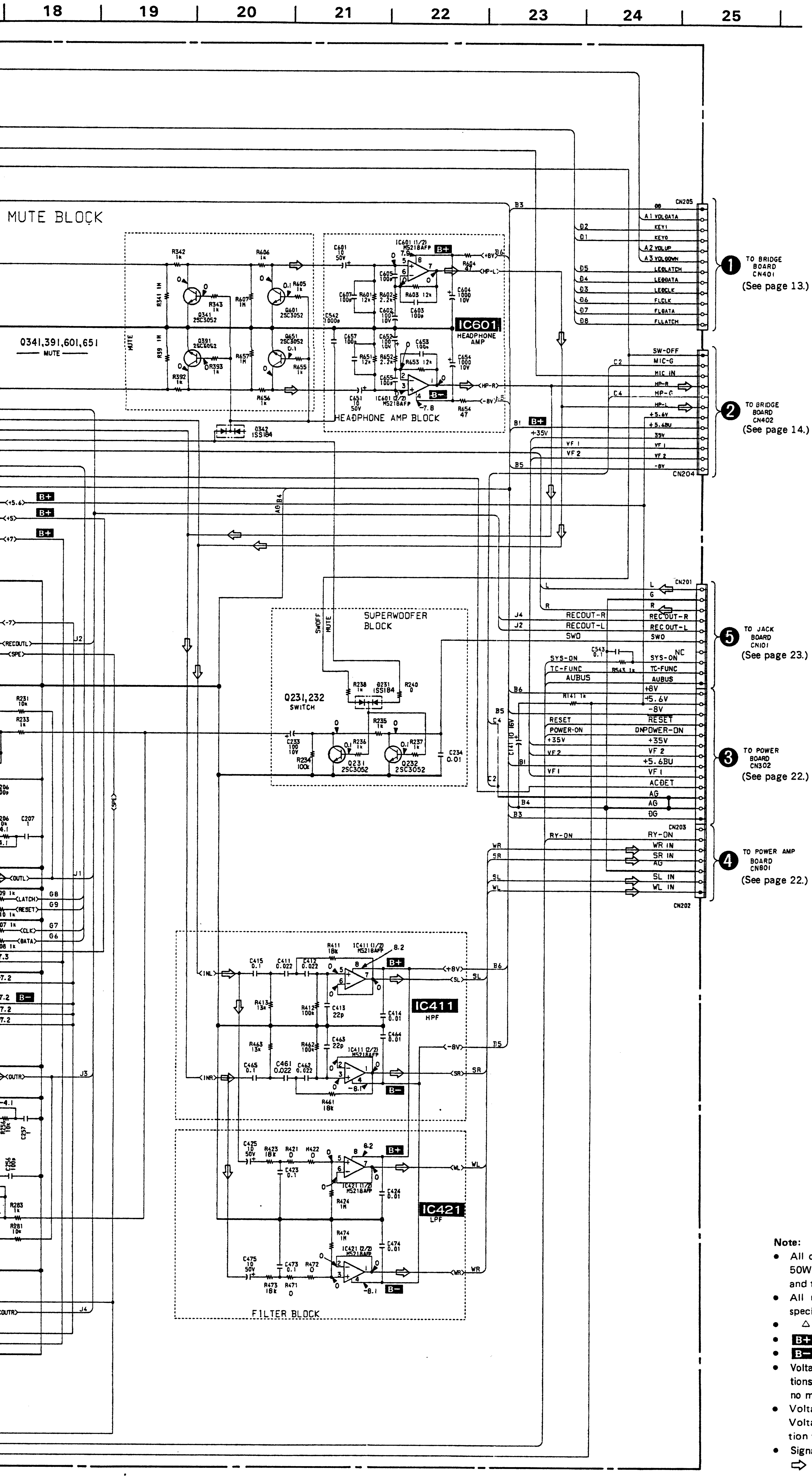
3-3. PRINTED WIRING BOARD—AUDIO SECTION—


1
2
3
4
5
6
7
8
9
A
B
C
D
E
(See page 18.)
TO BRIDGE BOARD CN401
❶
(See page 18.)
TO BRIDGE BOARD CN402
❷
【AUDIO BOARD】
(See page 20.)
TO POWER BOARD CN302
❸
(See page 20.)
TO POWER AMP BOARD CN801
❹
(See page 20.)
TO JACK BOARD CN101
❺
CN205
CN204
CN203
CN202
CN201
IC501
IC502
IC503
IC504
IC601
IC201
IC301
IC302
IC303
IC101
IC103
IC411
IC421
X501
04
11
1-642-430-

3-4. SCHEMATIC DIAGRAM—AUDIO SECTION— • Refer to page 29 for IC Block Diagrams.


[AUDIO BOARD]
IC303 AI BC VR
IC303 CD4052BCM
Q311,361 SWITCH
IC302 CD4053BCM
IC302 AI BC SWITCH
IC301 AI BC AMP
IC301 (1/2) M5218AFP
IC301 (2/2) M5218AFP
FOR COCOMP
D601 1SS184
Q502 POWER ON/OFF SWITCH
Q504 MUTE
Q342 SWITCH
IC101 BUFFER
IC501 μPD78134-XXX SYSTEM CONTROL
MICON BLOCK
X501 12MHz
Q501 SWITCH
Q506 POWER ON/OFF SWITCH
Q507 SYSTEM ON/OFF SWITCH
IC103 SURROUND SELECT
IC503 SPEANA SIGNAL SELECT
IC504 SPEANA BPF
IC504 XR1091DCP
IC505 CD4052BCM
IC502 E²P-ROM
IC502 X24C01P
FL-LATCH
FL-DATA
FL-CLK
KEY0
KEY1
LED-LATCH
LED-DATA
LED-CLK
VOL-DOWN
VOL-UP
VOL-DATA
RY-ON
POWER-ON
SYS-ON
AUBUS
TC-FUNC
RESET
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O

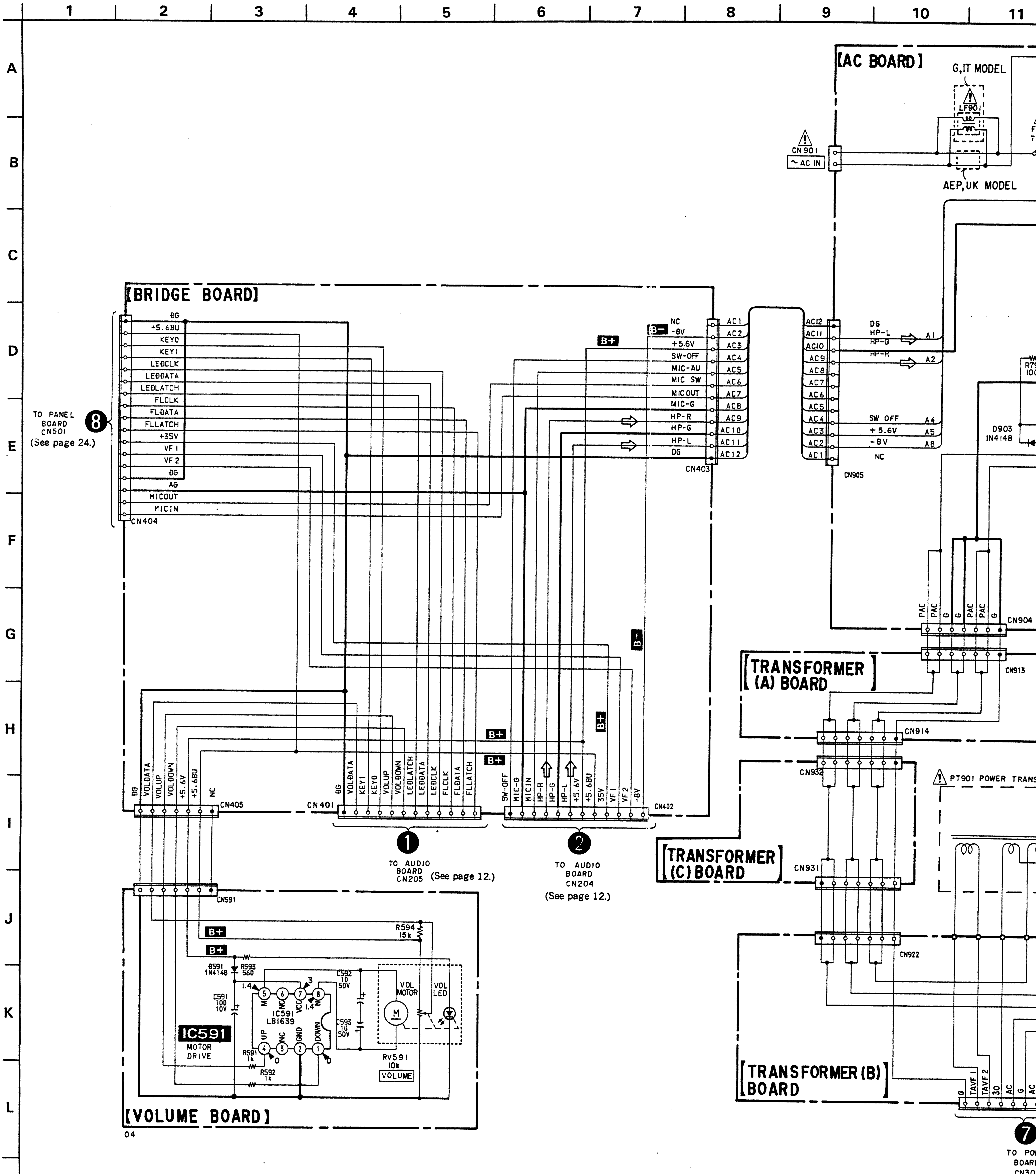

10
11
12
13
14
15
16
17
18
19
20
IC301
AI BC
AMP
IC301 (1/2) M5218AFP
IC301 (2/2) M5218AFP
MUTE BLOCK
Q341,391,601,651
MUTE
Q341 2SC3052
Q391 2SC3052
Q601 2SC3052
Q651 2SC3052
Q342 1SS184
D291 1SS184
D292 1SS184
Q291,292
RIPPLE
FILTER
Q291 2SC3052
Q292 2SA1235
IC101
BUFFER
IC101 (1/2) M5218AFP
IC101 (2/2) M5218AFP
IC201
IC201 CXA1492Q
DIGITAL CONTROL
GRAPHIC EQUALIZER,
ELECTRONIC VOLUME
Q231,232
SWITCH
IC103
SURROUND
SELECT
IC103 CD4051BCM
SUR BLOCK
FILTER BLOCK
B+
B-
(OUTR)
(INL)
(INR)
(MIC-OUT)
(ACDET)
(MUTE)
(SUR-L)
(SUR-R)
(SPE)
(RECOUTL)
(RECOUTR)
(LATCH)
(RESET)
(CLK)
(DATA)
J1
J2
J3
J4

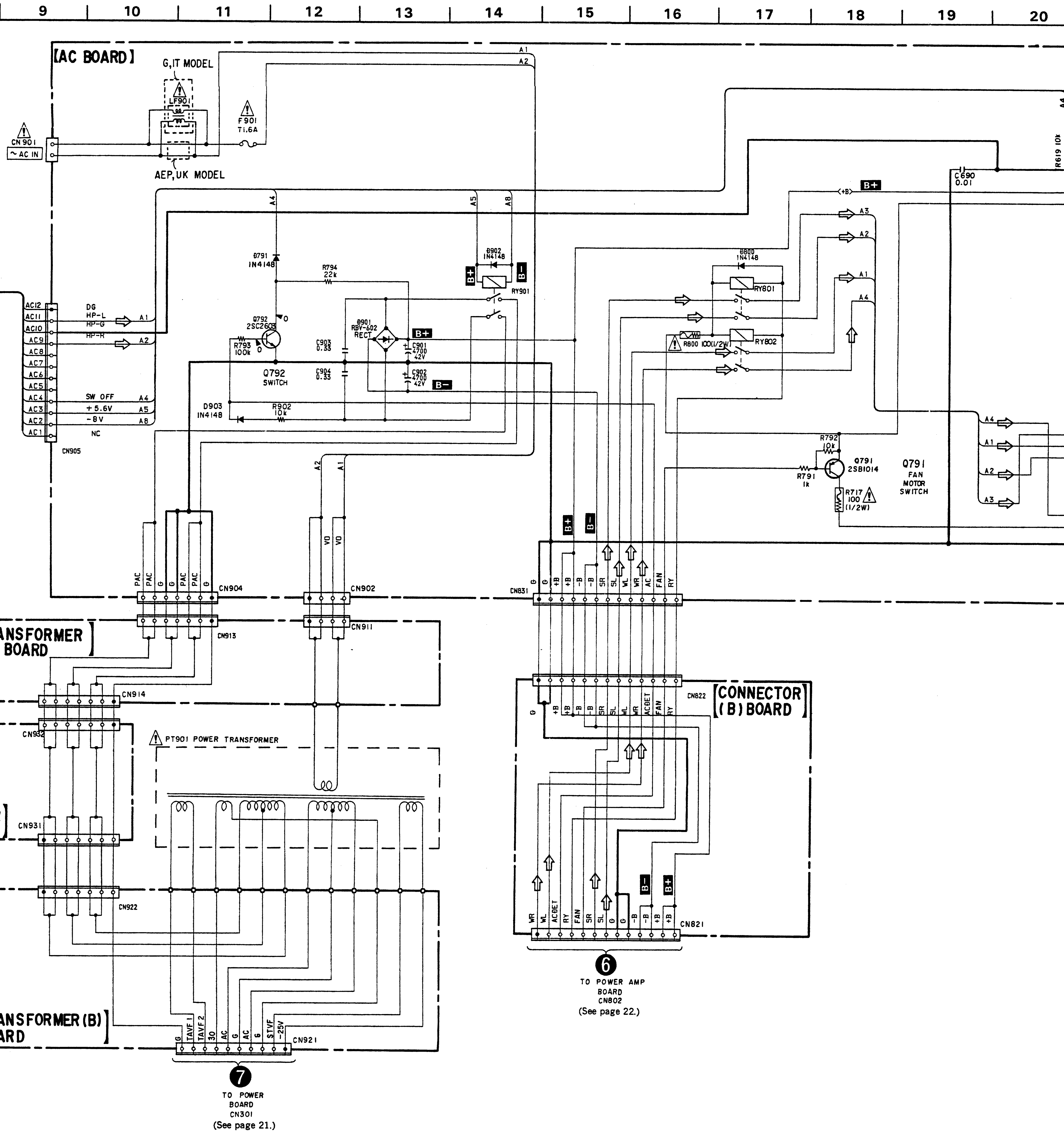

18
19
20
21
22
23
24
25
MUTE BLOCK
Q341,391,601,651
MUTE
R342 1k
R606 1k
R341 1M
Q341 2SC3052
R343 1k
Q601 2SC3052
R605 1k
R607 1M
Q391 2SC3052
R393 1k
Q651 2SC3052
R657 1M
R655 1k
R392 1k
R656 1k
D342 1SS184
HEADPHONE AMP BLOCK
IC601 (1/2) M5218AFP
IC601 (2/2) M5218AFP
IC601
HEADPHONE AMP
C601 10 50V
C651 10 50V
R604 47
R654 47
C604 1000 10V
C654 1000 10V
R603 12k
R653 12k
C542 1000p
B+
B-
(+8V)
(-8V)
(HP-L)
(HP-R)
CN205
B0
A1 VOLDATA
KEY1
KEY0
A2 VOLUP
A3 VOLDOWN
LEDLATCH
LEDDATA
LEDCLK
FLCLK
FLDATA
FLLATCH
TO BRIDGE BOARD CN401
(See page 13.)
CN204
SW-OFF
MIC-G
MIC IN
HP-R
HP-G
HP-L
+5.6V
+5.6BU
35V
VF1
VF2
-8V
TO BRIDGE BOARD CN402
(See page 14.)
SUPERWOOFER BLOCK
SWOFF
MUTE
Q231,232 SWITCH
R238 1k
D231 1SS184
R240 0
R235 1k
R236 1k
R237 1k
C233 100 10V
R234 100k
Q231 2SC3052
Q232 2SC3052
C234 0.01
CN201
L
G
R
RECOUT-R
RECOUT-L
SWO
SYS-ON
NC
TC-FUNC
AUBUS
C543 0.1
R543 1k
TO JACK BOARD CN101
(See page 23.)
+8V
+5.6V
-8V
RESET
POWER-ON
+35V
VF2
+5.6BU
VF1
ACDET
AG
DG
R141 1k
C141 10 16V
TO POWER BOARD CN302
(See page 22.)
CN203
RY-ON
WR IN
SR IN
AG
SL IN
WL IN
CN202
TO POWER AMP BOARD CN801
(See page 22.)
IC411 (1/2) M5218AFP
IC411 (2/2) M5218AFP
IC411
HPF
R411 18k
R461 18k
C415 0.1
C411 0.022
C412 0.022
R413 13k
R412 100k
C413 22p
C414 0.01
R463 13k
R462 100k
C463 22p
C464 0.01
C465 0.1
C461 0.022
C462 0.022
(INL)
(INR)
(SL)
(SR)
8.2
-8.1
IC421 (1/2) M5218AFP
IC421 (2/2) M5218AFP
IC421
LPF
C425 10 50V
R423 18k
R421 0
R422 0
C423 0.1
C424 0.01
R424 1M
R474 1M
C474 0.01
C475 10 50V
C473 0.1
R472 0
R473 18k
R471 0
(WL)
(WR)
FILTER BLOCK

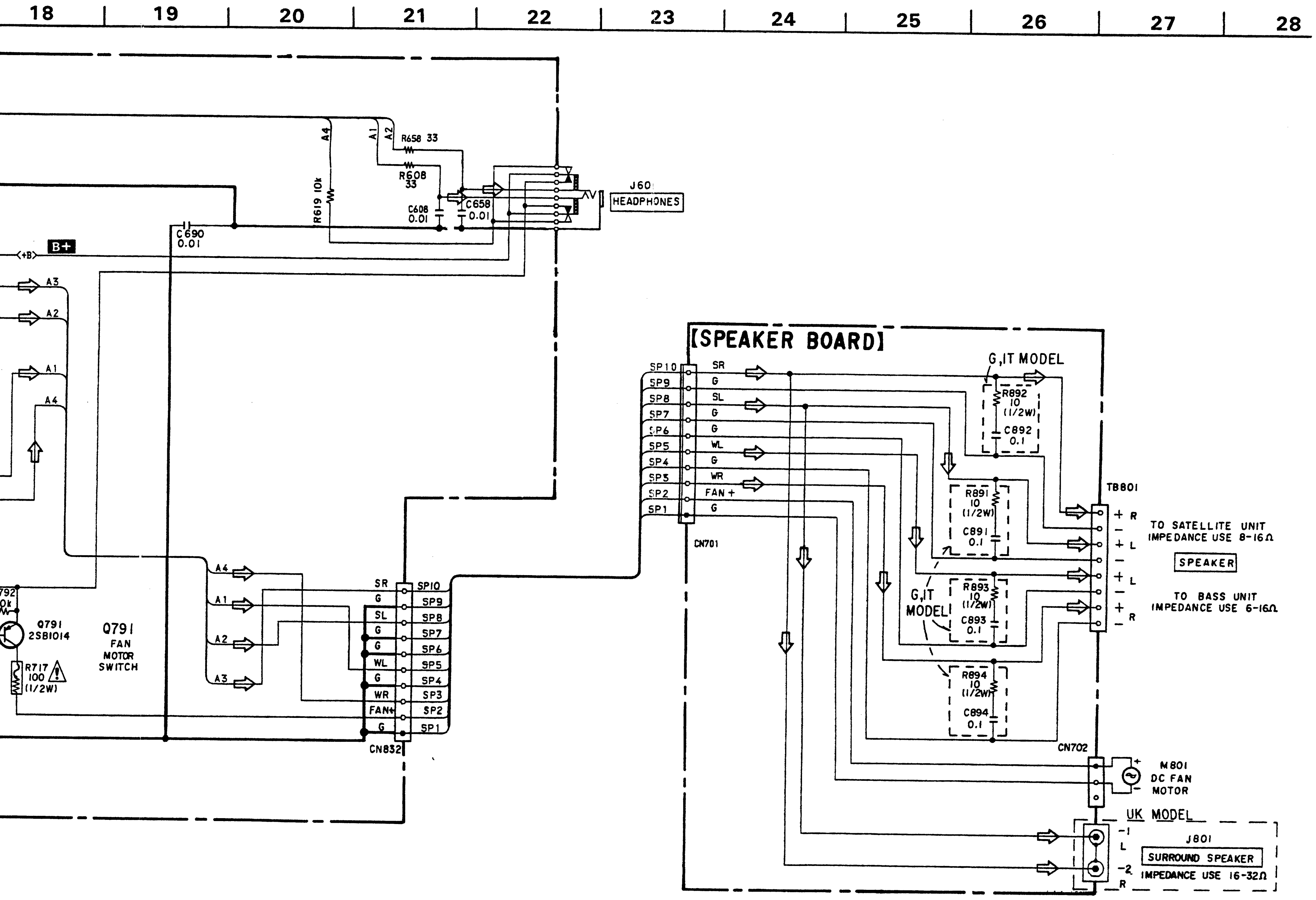
Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- △ : internal component.
- **B+** : B+ Line
- **B−** : B− Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark: SYSTEM POWER ON
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : TUNER

3-5. SCHEMATIC DIAGRAM—AC/VOLUME SECTION— • Refer to page 29 for IC Block Diagrams.


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
[AC BOARD]
G,IT MODEL
LF901
CN901
~AC IN
AEP,UK MODEL
[BRIDGE BOARD]
DG
+5.6BU
KEY0
KEY1
LEDCLK
LEDDATA
LEDLATCH
FLCLK
FLDATA
FLLATCH
+35V
VF1
VF2
DG
AG
MICOUT
MICIN
CN404
TO PANEL BOARD CN501 (See page 24.)
8
NC
-8V
+5.6V
SW-OFF
MIC-AU
MIC SW
MICOUT
MIC-G
HP-R
HP-G
HP-L
DG
AC1
AC2
AC3
AC4
AC5
AC6
AC7
AC8
AC9
AC10
AC11
AC12
CN403
B+
B−
AC12
AC11
AC10
AC9
AC8
AC7
AC6
AC5
AC4
AC3
AC2
AC1
CN905
DG
HP-L
HP-G
HP-R
A1
A2
SW OFF
+5.6V
-8V
NC
A4
A5
A8
R79
10
D903
1N4148
PAC
PAC
G
PAC
PAC
G
CN904
[TRANSFORMER (A) BOARD]
CN913
CN914
CN932
PT901 POWER TRANS
[TRANSFORMER (C) BOARD]
CN931
CN922
[TRANSFORMER (B) BOARD]
G
TAVF1
TAVF2
30
AC
G
AC
7
TO PO BOARD CN30 (See pag
DG
VOLDATA
VOLUP
VOLDOWN
+5.6V
+5.6BU
NC
CN405
CN401
DG
VOLDATA
KEY1
KEY0
VOLUP
VOLDOWN
LEDLATCH
LEDDATA
LEDCLK
FLCLK
FLDATA
FLLATCH
SW-OFF
MIC-G
MICIN
HP-R
HP-G
HP-L
+5.6V
+5.6BU
35V
VF1
VF2
-8V
CN402
1
TO AUDIO BOARD CN205 (See page 12.)
2
TO AUDIO BOARD CN204 (See page 12.)
CN591
R594 15k
D591 1N4148
R593 560
1.4
3
C591 100 10V
IC591 LB1639
C592 10 50V
C593 10 50V
VOL MOTOR
VOL LED
M
IC591
MOTOR DRIVE
R591 1k
R592 1k
UP
NC
GND
DOWN
VCC
RV591 10k VOLUME
[VOLUME BOARD]
04


9
10
11
12
13
14
15
16
17
18
19
20
[AC BOARD]
G,IT MODEL
LF901
AEP,UK MODEL
CN901
~ AC IN
F901
T1.6A
A1
A2
A4
A5
A8
D791
1N4148
R794
22k
D902
1N4148
B+
B-
RY901
Q792
2SC2603
R793
100k
Q792
SWITCH
C903
0.33
C904
0.33
D901
RBV-602
RECT
C901
4700
42V
C902
4700
42V
D903
1N4148
R902
10k
AC12
AC11
AC10
AC9
AC8
AC7
AC6
AC5
AC4
AC3
AC2
AC1
CN905
DG
HP-L
HP-G
HP-R
SW OFF
+5.6V
-8V
NC
A3
D800
1N4148
RY801
R800 100(1/2W)
RY802
C690
0.01
R619 10k
R792
10k
Q791
2SB1014
R791
1k
R717
100
(1/2W)
Q791
FAN
MOTOR
SWITCH
PAC
PAC
G
G
PAC
PAC
G
CN904
VO
VO
CN902
CN913
CN911
G
G
+B
+B
-B
-B
SR
SL
WL
WR
AC
FAN
RY
CN831
ANSFORMER
BOARD
CN914
CN932
PT901 POWER TRANSFORMER
CN931
CN922
CN822
ACDET
[CONNECTOR
(B) BOARD]
WR
WL
ACDET
RY
FAN
SR
SL
G
-B
-B
+B
+B
CN821
⑥
TO POWER AMP
BOARD
CN802
(See page 22.)
ANSFORMER (B)
ARD
G
TAVF1
TAVF2
30
AC
G
AC
6
STVF
-25V
CN921
⑦
TO POWER
BOARD
CN301
(See page 21.)


18
19
20
21
22
23
24
25
26
27
28
A4
A1
A2
R658 33
R608 33
R619 10k
C606 0.01
C658 0.01
J601
HEADPHONES
C690 0.01
B+
A3
A2
A1
A4
Q791 2SB1014
Q791 FAN MOTOR SWITCH
R717 100 (1/2W)
A4
A1
A2
A3
SR
G
SL
G
G
WL
G
WR
FAN+
G
SP10
SP9
SP8
SP7
SP6
SP5
SP4
SP3
SP2
SP1
CN832
[SPEAKER BOARD]
SP10
SP9
SP8
SP7
SP6
SP5
SP4
SP3
SP2
SP1
SR
G
SL
G
G
WL
G
WR
FAN +
G
CN701
G,IT MODEL
R892 10 (1/2W)
C892 0.1
R891 10 (1/2W)
C891 0.1
G,IT MODEL
R893 10 (1/2W)
C893 0.1
R894 10 (1/2W)
C894 0.1
TB801
TO SATELLITE UNIT IMPEDANCE USE 8-16Ω
SPEAKER
TO BASS UNIT IMPEDANCE USE 6-16Ω
CN702
M801 DC FAN MOTOR
UK MODEL
J801
SURROUND SPEAKER
IMPEDANCE USE 16-32Ω
L
R

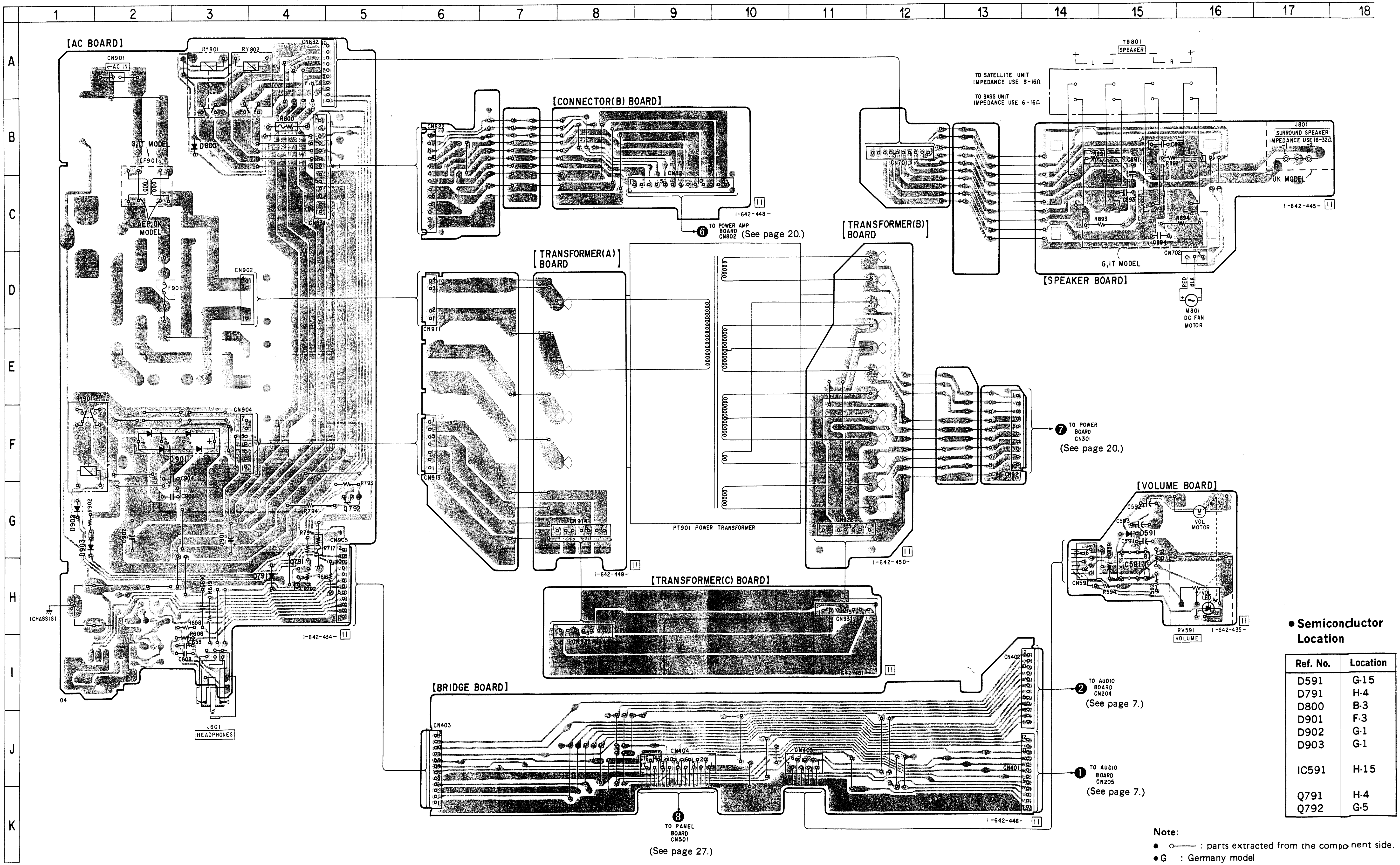
Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- **B+** : B+ Line
- **B–** : B– Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark: SYSTEM POWER ON
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : TUNER
- G : Germany model
  IT : Italian model

3-6. PRINTED WIRING BOARDS—AC/VOLUME SECTION— • Refer to page 6 for Semiconductor Lead Layouts.


1
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12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
I
J
K
[AC BOARD]
CN901
~AC IN
RY801
RY802
CN832
R800
D800
G,IT MODEL
LF901
AEP,UK MODEL
CN831
CN902
F901
RY901
CN904
D901
C904
C903
D902
R902
D903
C901
C905
R793
R794
Q792
R791
R717
CN905
Q791
D791
R792
C619
C620
R656
R658
R608
C606
C608
(CHASSIS)
J601
HEADPHONES
04
1-642-434-
[CONNECTOR(B) BOARD]
CN822
CN821
1-642-448-
⑥ TO POWER AMP BOARD CN802 (See page 20.)
[TRANSFORMER(A) BOARD]
CN911
CN913
CN914
1-642-449-
PT901 POWER TRANSFORMER
[TRANSFORMER(B) BOARD]
CN922
CN921
1-642-450-
⑦ TO POWER BOARD CN301 (See page 20.)
[TRANSFORMER(C) BOARD]
CN931
CN932
1-642-451-
TB801
SPEAKER
+ L - - R +
TO SATELLITE UNIT IMPEDANCE USE 8-16Ω
TO BASS UNIT IMPEDANCE USE 6-16Ω
CN701
J801
SURROUND SPEAKER IMPEDANCE USE 16-32Ω
UK MODEL
R891
C891
C892
R892
C893
R893
R894
C894
CN702
G,IT MODEL
1-642-445-
[SPEAKER BOARD]
RED
BLK
M801 DC FAN MOTOR
[VOLUME BOARD]
C592
M VOL MOTOR
C593
D591
C591
CN591
IC591
R593
R594
R592
VOL LED
RV591
VOLUME
1-642-435-
[BRIDGE BOARD]
CN402
② TO AUDIO BOARD CN204 (See page 7.)
CN403
CN404
CN405
CN401
① TO AUDIO BOARD CN205 (See page 7.)
⑧ TO PANEL BOARD CN501 (See page 27.)
1-642-446-

• Semiconductor Location

Ref. No.	Location
D591	G-15
D791	H-4
D800	B-3
D901	F-3
D902	G-1
D903	G-1
IC591	H-15
Q791	H-4
Q792	G-5

Note:

- ○—— : parts extracted from the component side.
- G : Germany model
  IT : Italian model

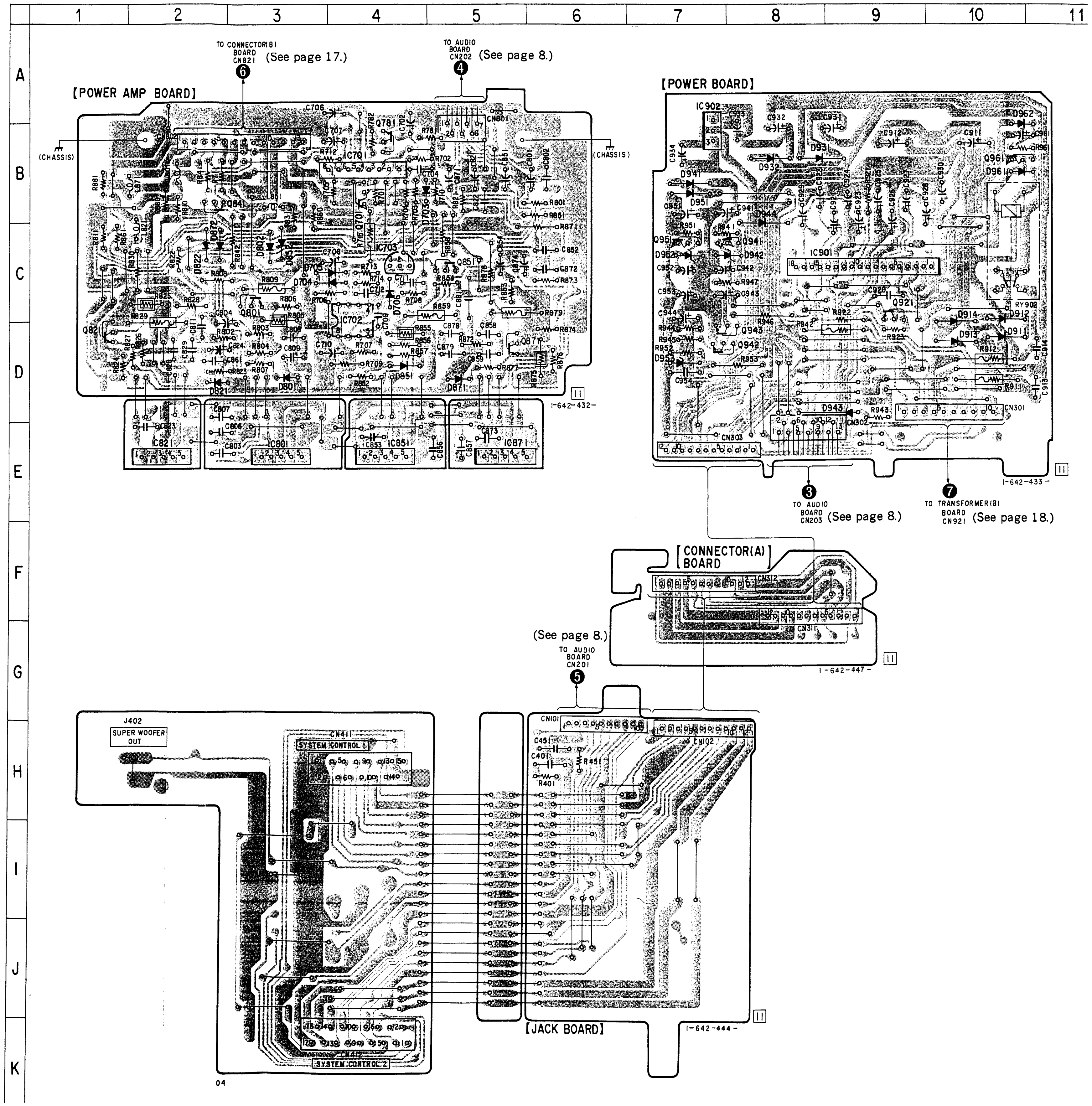
• Semiconductor Location

Ref. No.	Location
D703	B-4
D704	C-3
D705	C-3
D706	C-4
D801	D-3
D802	C-3
D821	D-2
D822	C-2
D851	D-4
D852	C-3
D871	D-5
D872	C-2
D911	D-10
D912	C-10
D913	D-10
D914	C-10
D931	B-8
D932	B-8
D941	B-7
D942	C-8
D943	D-9
D944	B-8
D951	B-7
D952	C-7
D953	D-7
D961	B-10
D962	B-10
IC701	B-4
IC702	C-4
IC703	C-4
IC801	E-3
IC821	E-2
IC851	E-4
IC871	E-5
IC901	C-9
IC902	B-7
Q701	B-4
Q781	B-4
Q801	C-3
Q821	D-1
Q841	B-2
Q851	C-5
Q871	D-5
Q921	C-9
Q941	C-8
Q942	D-8
Q943	D-8
Q951	C-7
Q961	B-10

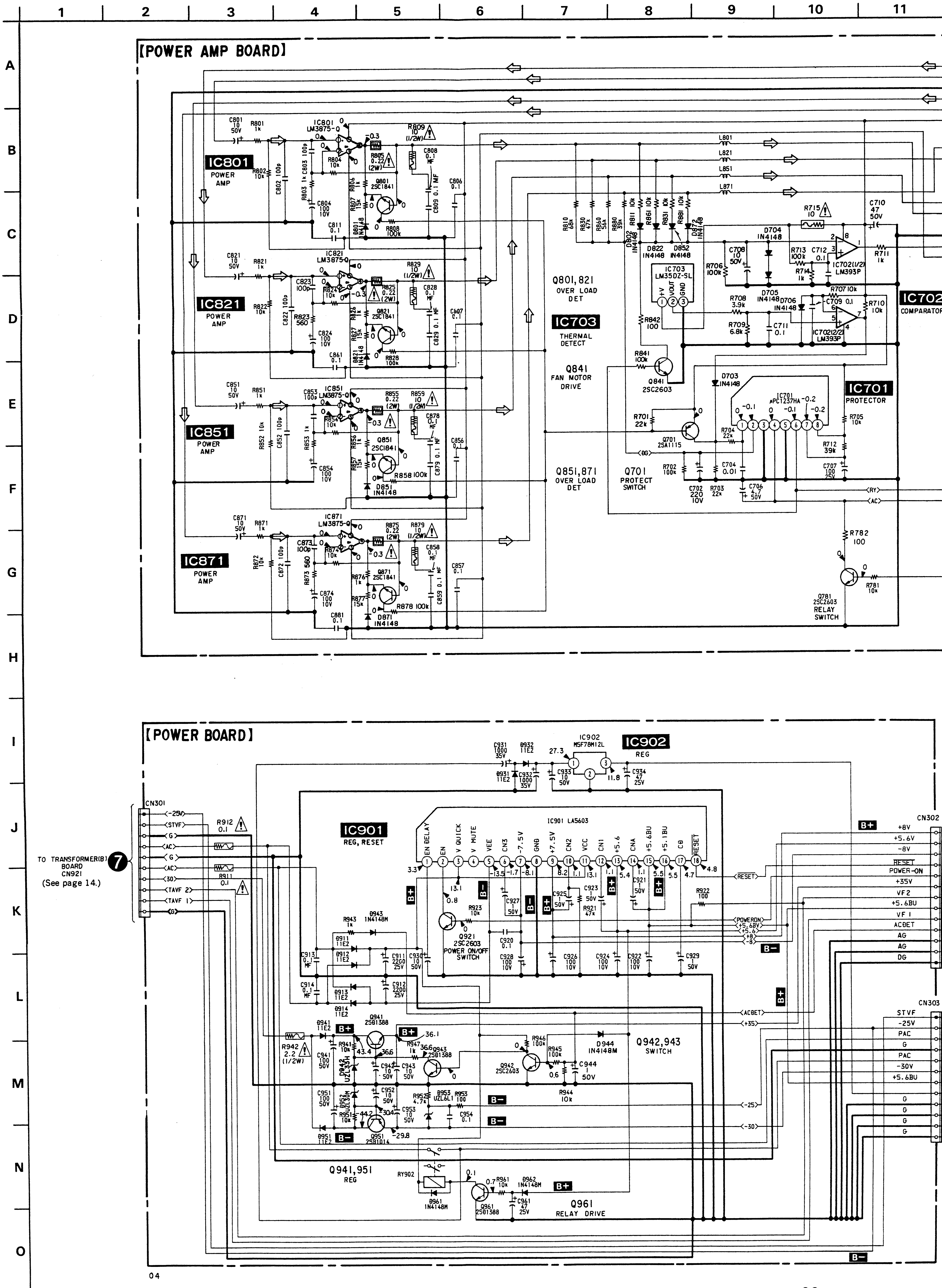
Note:

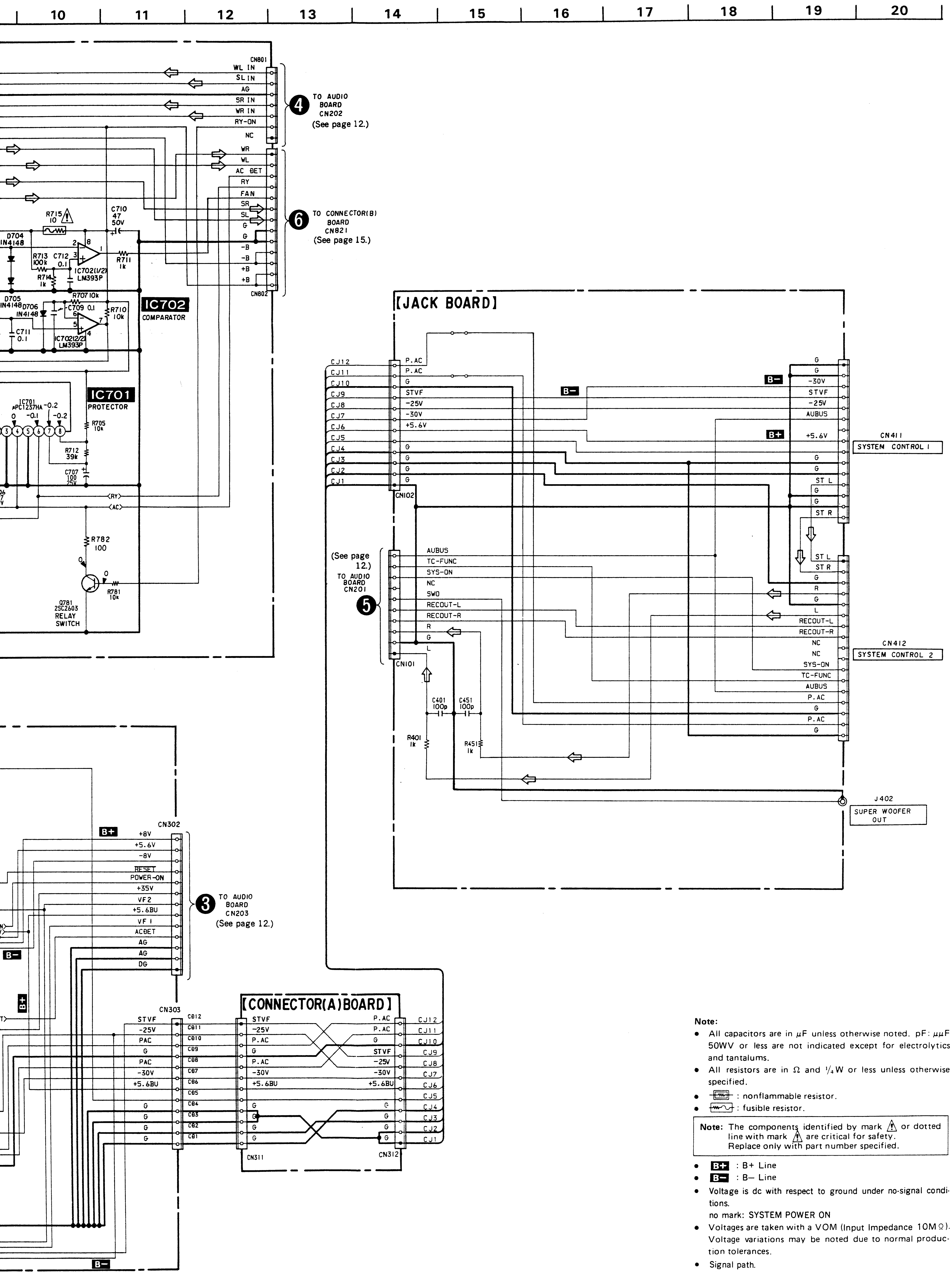
- o—— : parts extracted from the component side.

3-7. PRINTED WIRING BOARDS—POWER/POWER AMP SECTION— • Refer to page 6 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
TO CONNECTOR(B) BOARD CN821 (See page 17.)
❻
TO AUDIO BOARD CN202 (See page 8.)
❹
[POWER AMP BOARD]
(CHASSIS)
(CHASSIS)
IC701
IC702
IC703
IC801
IC821
IC851
IC871
1-642-432-
[POWER BOARD]
IC902
IC901
CN301
CN302
CN303
RY902
1-642-433-
❸
TO AUDIO BOARD CN203 (See page 8.)
❼
TO TRANSFORMER(B) BOARD CN921 (See page 18.)
[CONNECTOR(A) BOARD]
CN312
CN311
1-642-447-
(See page 8.)
TO AUDIO BOARD CN201
❺
J402
SUPER WOOFER OUT
CN411
SYSTEM CONTROL 1
CN412
SYSTEM CONTROL 2
CN101
CN102
C451
C401
R451
R401
[JACK BOARD]
1-642-444-
04

3-8. SCHEMATIC DIAGRAM—POWER/POWER AMP SECTION— • Refer to page 29 for IC Block Diagrams.


[POWER AMP BOARD]
IC801 POWER AMP
IC801 LM3875-Q
IC821 POWER AMP
IC821 LM3875-Q
IC851 POWER AMP
IC851 LM3875-Q
IC871 POWER AMP
IC871 LM3875-Q
Q801,821 OVER LOAD DET
IC703 THERMAL DETECT
IC703 LM35DZ-SL
Q841 FAN MOTOR DRIVE
Q841 2SC2603
Q851,871 OVER LOAD DET
Q701 PROTECT SWITCH
Q701 2SA1115
IC701 PROTECTOR
IC701 μPC1237HA
IC702 COMPARATOR
IC702 LM393P
Q781 2SC2603 RELAY SWITCH
Q801 2SC1841
Q821 2SC1841
Q851 2SC1841
Q871 2SC1841
D704 1N4148
D705 1N4148
D706 1N4148
D703 1N4148
RY
AC
[POWER BOARD]
CN301
TO TRANSFORMER(B) BOARD CN921 (See page 14.)
7
IC901 REG, RESET
IC901 LA5603
IC902 REG
IC902 MSF78M12L
EN DELAY
EN
V QUICK
V MUTE
VEE
CN3
-7.5V
GND
+7.5V
CN2
VCC
CN1
+5.6
CNA
+5.6BU
+5.1BU
C0
RESET
Q921 2SC2603 POWER ON/OFF SWITCH
Q941,951 REG
Q941 2SB1388
Q943 2SB1388
Q951 2SB1014
Q942,943 SWITCH
Q942 2SC2603
D944 1N4148M
RY902
Q961 RELAY DRIVE
Q961 2SB1388
D961 1N4148M
D962 1N4148M
B+
B−
CN302
+8V
+5.6V
-8V
RESET
POWER-ON
+35V
VF2
+5.6BU
VF1
ACDET
AG
AG
DG
CN303
STVF
-25V
PAC
G
PAC
-30V
+5.6BU
G
G
G
G
(-25V)
(STVF)
(G)
(AC)
(G)
(AC)
(30)
(TAVF 2)
(TAVF 1)
(G)
(RESET)
(POWERON)
(+5.6BV)
(+5.6)
(+8)
(-8)
(ACDET)
(+35)
(-25)
(-30)
R912 0.1
R911 0.1
R942 2.2 (1/2W)
04
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O


10
11
12
13
14
15
16
17
18
19
20
CN801
WL IN
SL IN
AG
SR IN
WR IN
RY-ON
NC
4 TO AUDIO BOARD CN202 (See page 12.)
WR
WL
AC DET
RY
FAN
SR
SL
G
G
-B
-B
+B
+B
CN802
6 TO CONNECTOR(B) BOARD CN821 (See page 15.)
R715 10
C710 47 50V
D704 1N4148
R713 100k
C712 0.1
R714 1k
R711 1k
IC702(1/2) LM393P
D705 1N4148
D706 1N4148
R707 10k
C709 0.1
R710 10k
C711 0.1
IC702(2/2) LM393P
IC702
COMPARATOR
IC701
PROTECTOR
IC701 μPC1237HA
R705 10k
R712 39k
C707 100 25V
R782 100
R781 10k
Q781 2SC2603 RELAY SWITCH
[JACK BOARD]
CJ12
CJ11
CJ10
CJ9
CJ8
CJ7
CJ6
CJ5
CJ4
CJ3
CJ2
CJ1
P.AC
STVF
-25V
-30V
+5.6V
CN102
(See page 12.)
TO AUDIO BOARD CN201
5
AUBUS
TC-FUNC
SYS-ON
NC
SWO
RECOUT-L
RECOUT-R
R
G
L
CN101
C401 100p
C451 100p
R401 1k
R451 1k
B−
B+
ST L
ST R
CN411
SYSTEM CONTROL 1
CN412
SYSTEM CONTROL 2
J402
SUPER WOOFER OUT
CN302
+8V
+5.6V
-8V
RESET
POWER-ON
+35V
VF2
+5.6BU
VF1
ACDET
AG
DG
3 TO AUDIO BOARD CN203 (See page 12.)
CN303
PAC
+5.6BU
[CONNECTOR(A)BOARD]
CN311
CN312

Note:

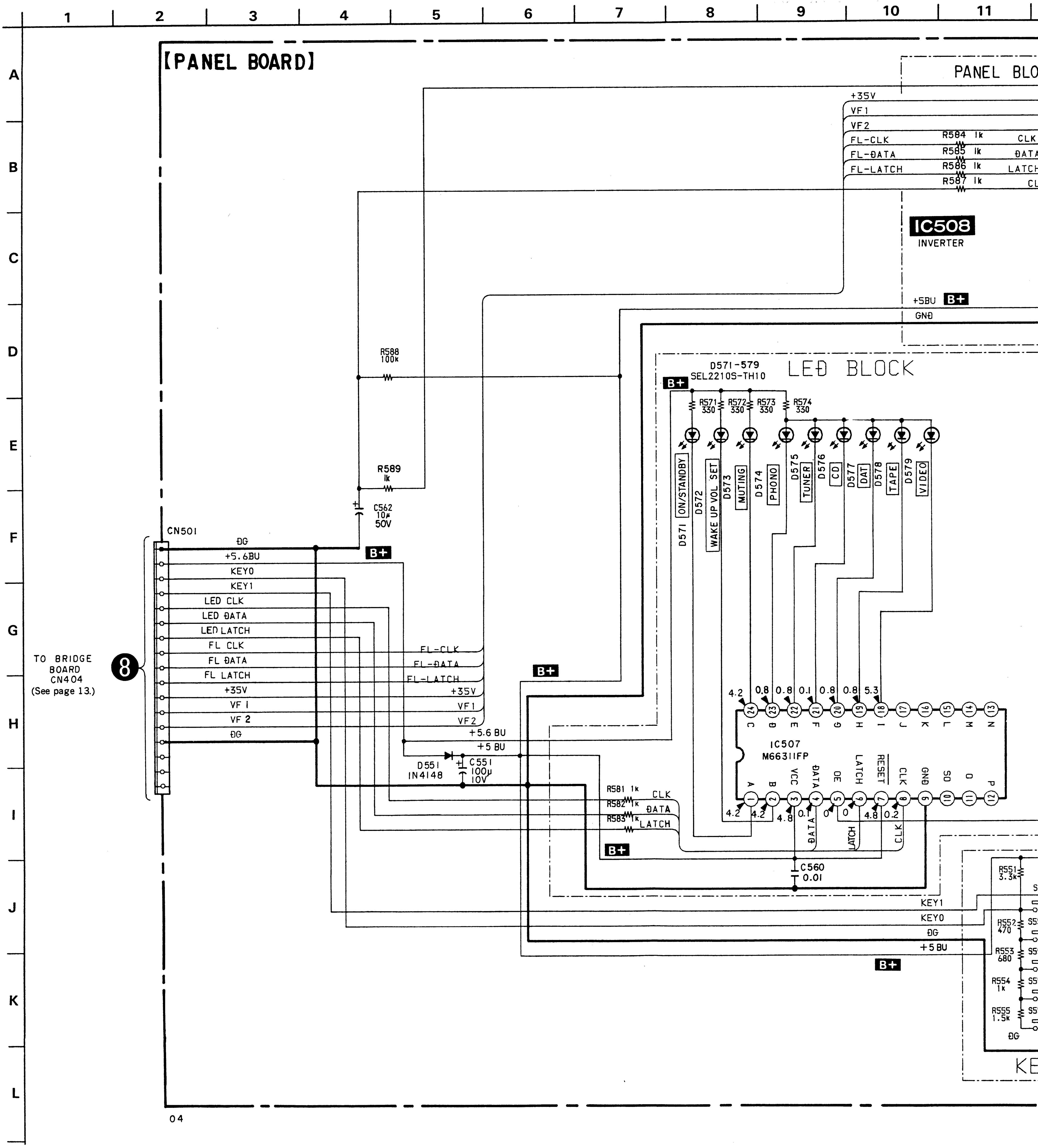
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- **B+** : B+ Line
- **B−** : B− Line
- Voltage is dc with respect to ground under no-signal conditions.
  no mark: SYSTEM POWER ON
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : TUNER

Note:
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4$W or less unless otherwise specified.
- **B+** : B+ Line
- **B−** : B− Line

3-9. SCHEMATIC DIAGRAM—PANEL SECTION— • Refer to page 29 for IC Block Diagrams.



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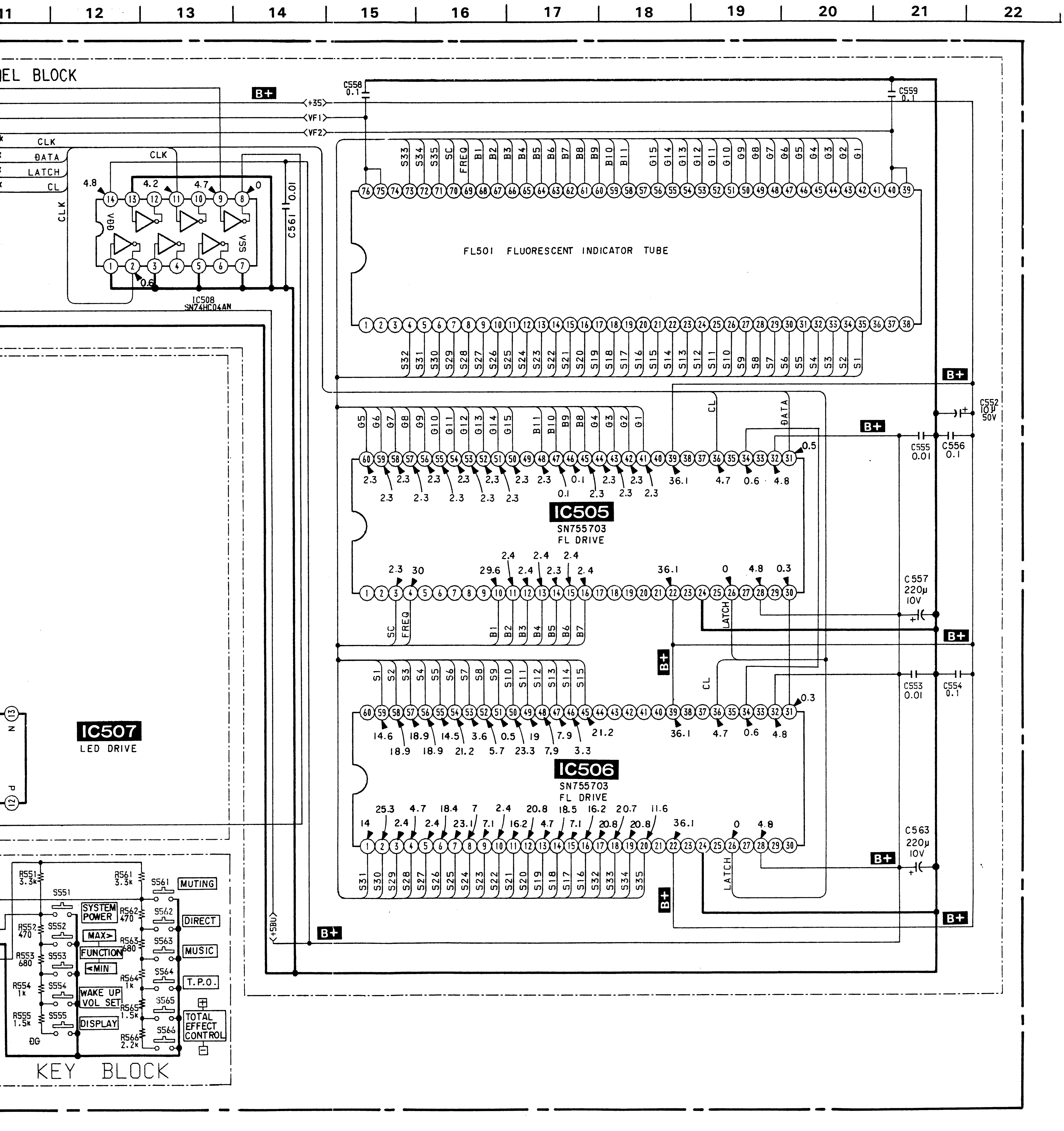
11
A
B
C
D
E
F
G
H
I
J
K
L
[PANEL BOARD]
PANEL BLO
+35V
VF1
VF2
FL-CLK
FL-DATA
FL-LATCH
R584 1k
R585 1k
R586 1k
R587 1k
CLK
DATA
LATCH
CL
IC508
INVERTER
+5BU
B+
GND
R588
100k
R589
1k
C562
10μ
50V
D571-579
SEL2210S-TH10
LED BLOCK
R571 330
R572 330
R573 330
R574 330
D571 ON/STANDBY
D572 WAKE UP VOL SET
D573 MUTING
D574 PHONO
D575 TUNER
D576 CD
D577 DAT
D578 TAPE
D579 VIDEO
CN501
DG
+5.6BU
KEY0
KEY1
LED CLK
LED DATA
LED LATCH
FL CLK
FL DATA
FL LATCH
+35V
VF 1
VF 2
DG
TO BRIDGE BOARD CN404 (See page 13.)
8
FL-CLK
FL-DATA
FL-LATCH
+35V
VF1
VF2
+5.6 BU
+5 BU
D551
1N4148
C551
100μ
10V
4.2
0.8
0.8
0.1
0.8
0.8
5.3
C D E F G H I J K L M N
IC507
M66311FP
A B VCC DATA OE LATCH RESET CLK GND SO O P
R581 1k
R582 1k
R583 1k
CLK
DATA
LATCH
4.2
4.2
4.8
0.1
0
4.8
0.2
DATA
LATCH
CLK
C560
0.01
KEY1
KEY0
DG
+5 BU
R551 3.3k
R552 470
R553 680
R554 1k
R555 1.5k
DG
KE
04

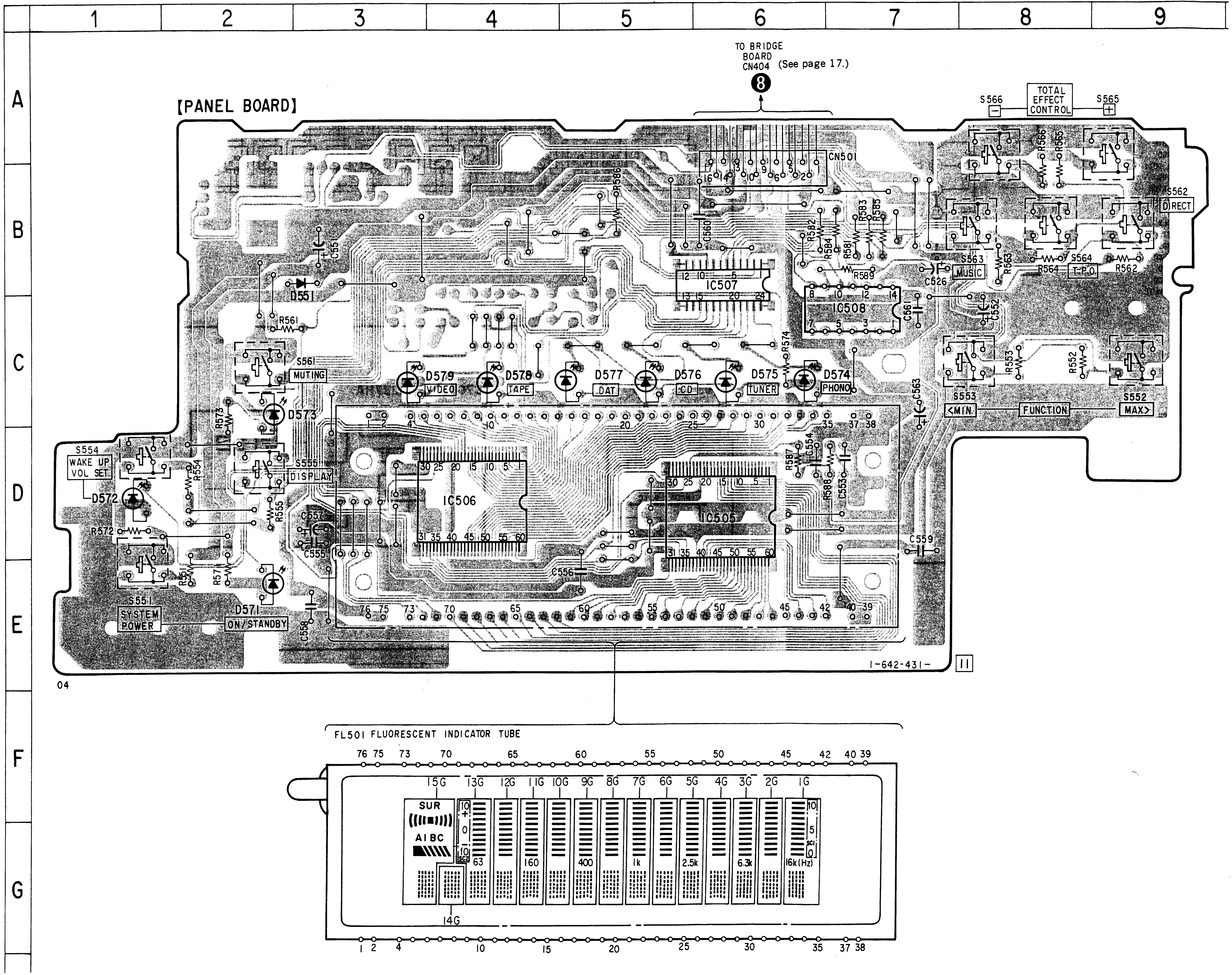
pF: μμF
trolytics
therwise

- Voltage is dc with respect to ground under no-signal conditions.
  no mark: SYSTEM POWER ON
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.



11
12
13
14
15
16
17
18
19
20
21
22
EL BLOCK
B+
+35
VF1
VF2
C558 0.1
C559 0.1
CLK
DATA
LATCH
CL
IC508 SN74HC04AN
VDD
VSS
C561 0.01
FL501 FLUORESCENT INDICATOR TUBE
IC505
SN755703
FL DRIVE
IC506
SN755703
FL DRIVE
C552 10μ 50V
C555 0.01
C556 0.1
C557 220μ 10V
C553 0.01
C554 0.1
C563 220μ 10V
IC507
LED DRIVE
+5BU
R551 3.3k
R552 470
R553 680
R554 1k
R555 1.5k
R561 3.3k
R562 470
R563 680
R564 1k
R565 1.5k
R566 2.2k
S551
S552
S553
S554
S555
S561
S562
S563
S564
S565
S566
SYSTEM POWER
MAX>
FUNCTION
<MIN
WAKE UP VOL SET
DISPLAY
MUTING
DIRECT
MUSIC
T.P.O.
TOTAL EFFECT CONTROL
KEY BLOCK

3-10. PRINTED WIRING BOARD—PANEL SECTION— • Refer to page 6 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
[PANEL BOARD]
TO BRIDGE BOARD CN404 (See page 17.)
8
CN501
S566
TOTAL EFFECT CONTROL
S565
R566
R565
S562
DIRECT
R586
C55
D551
C560
IC507
R582
R584
R581
R583
R585
R589
C526
S563
MUSIC
R563
R564
S564
T-P.O
R562
IC508
C561
C552
R561
S561
MUTING
D579
VIDEO
D578
TAPE
D577
DAT
D576
CD
D575
TUNER
R574
D574
PHONO
C563
R553
R552
S553
<MIN.
FUNCTION
S552
MAX>
D573
R573
S554
WAKE UP VOL SET
R554
S555
DISPLAY
D572
R555
R572
IC506
C557
C555
R587
C554
R588
C553
IC505
C559
C556
R551
R571
S551
SYSTEM POWER
D571
ON/STANDBY
C558
1-642-431-
11
04
FL501 FLUORESCENT INDICATOR TUBE
15G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
14G
SUR
A I B C
63
160
400
1k
2.5k
6.3k
16k(Hz)

• Semiconductor Location

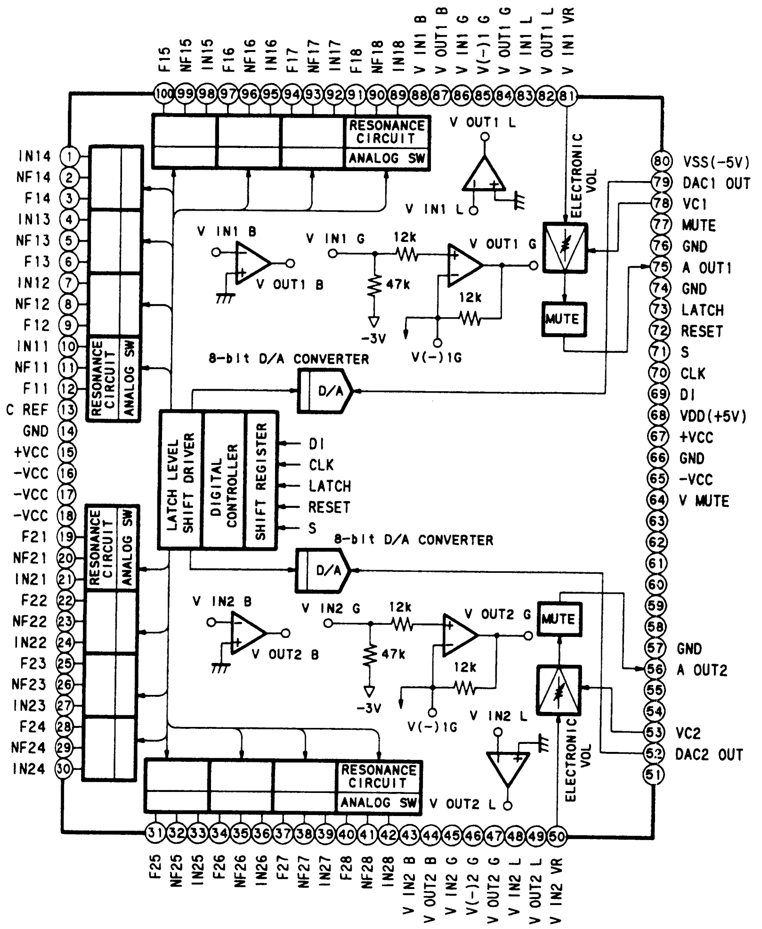
Ref. No.	Location
D551	B-3
D571	E-2
D572	D-1
D573	C-2
D574	C-6
D575	C-6
D576	C-5
D577	C-5
D578	C-4
D579	C-3
IC505	D-6
IC506	D-4
IC507	B-6
IC508	C-7

Note:

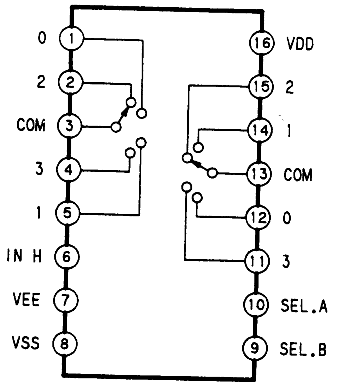
- ○—— : parts extracted from the component side.

• IC Block Diagrams

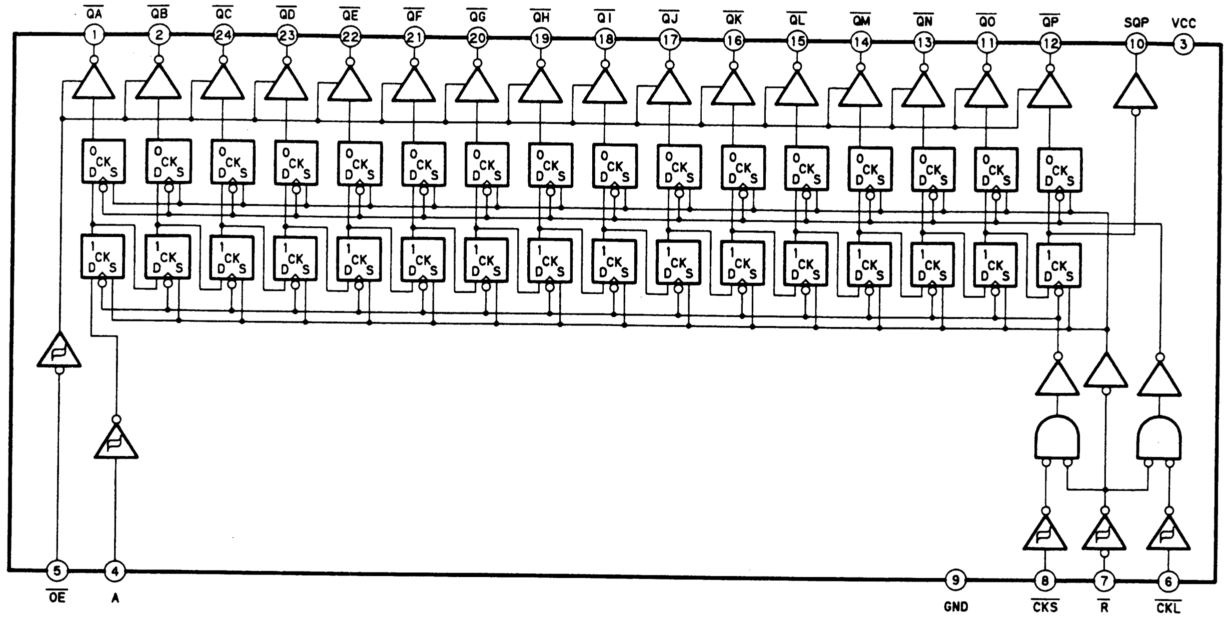
IC201 CXA1492Q


F15
NF15
IN15
F16
NF16
IN16
F17
NF17
IN17
F18
NF18
IN18
V IN1 B
V OUT1 B
V IN1 G
V(-)1 G
V OUT1 G
V IN1 L
V OUT1 L
V IN1 VR
IN14
NF14
F14
IN13
NF13
F13
IN12
NF12
F12
IN11
NF11
F11
C REF
GND
+VCC
-VCC
-VCC
-VCC
F21
NF21
IN21
F22
NF22
IN22
F23
NF23
IN23
F24
NF24
IN24
VSS(-5V)
DAC1 OUT
VC1
MUTE
GND
A OUT1
GND
LATCH
RESET
S
CLK
DI
VDD(+5V)
+VCC
GND
-VCC
V MUTE
GND
A OUT2
VC2
DAC2 OUT
F25
NF25
IN25
F26
NF26
IN26
F27
NF27
IN27
F28
NF28
IN28
V IN2 B
V OUT2 B
V IN2 G
V(-)2 G
V OUT2 G
V IN2 L
V OUT2 L
V IN2 VR
RESONANCE CIRCUIT
ANALOG SW
ELECTRONIC VOL
12k
47k
-3V
V(-)1G
V(-)1G
MUTE
8-bit D/A CONVERTER
D/A
LATCH LEVEL SHIFT DRIVER
DIGITAL CONTROLLER
SHIFT REGISTER

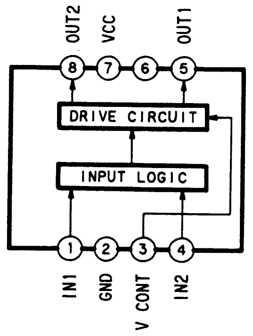
IC303, 503 CD4052BCM


0
2
COM
3
1
IN H
VEE
VSS
VDD
2
1
COM
0
3
SEL.A
SEL.B

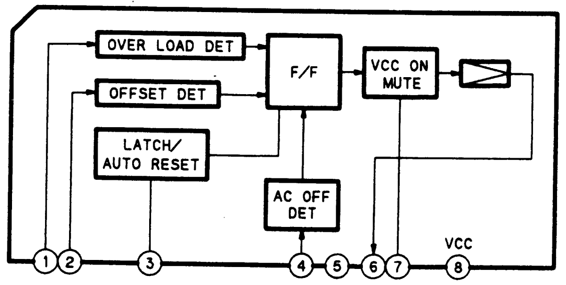
IC507 M66311FP


QA
QB
QC
QD
QE
QF
QG
QH
QI
QJ
QK
QL
QM
QN
QO
QP
SQP
VCC
CK
D
S
OE
A
GND
CKS
R
CKL

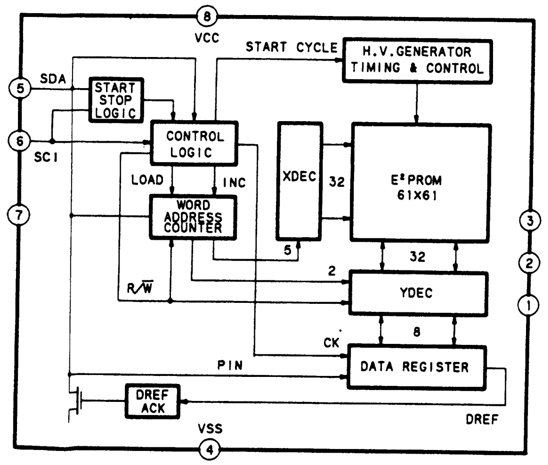
IC591 LB1639


OUT2
VCC
OUT1
DRIVE CIRCUIT
INPUT LOGIC
IN1
GND
V CONT
IN2

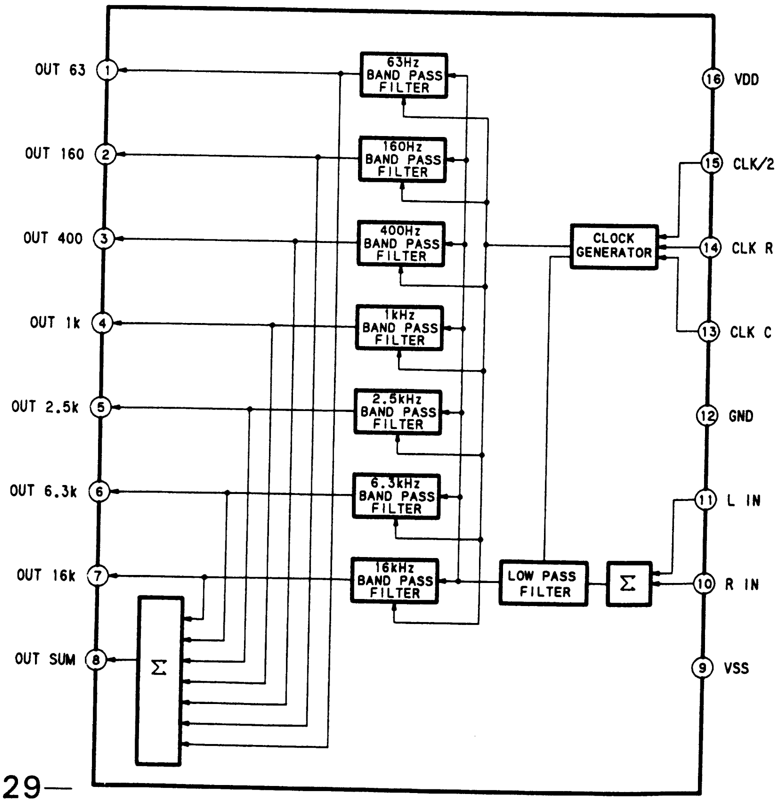
IC701 µPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/ AUTO RESET
F/F
VCC ON MUTE
AC OFF DET
VCC

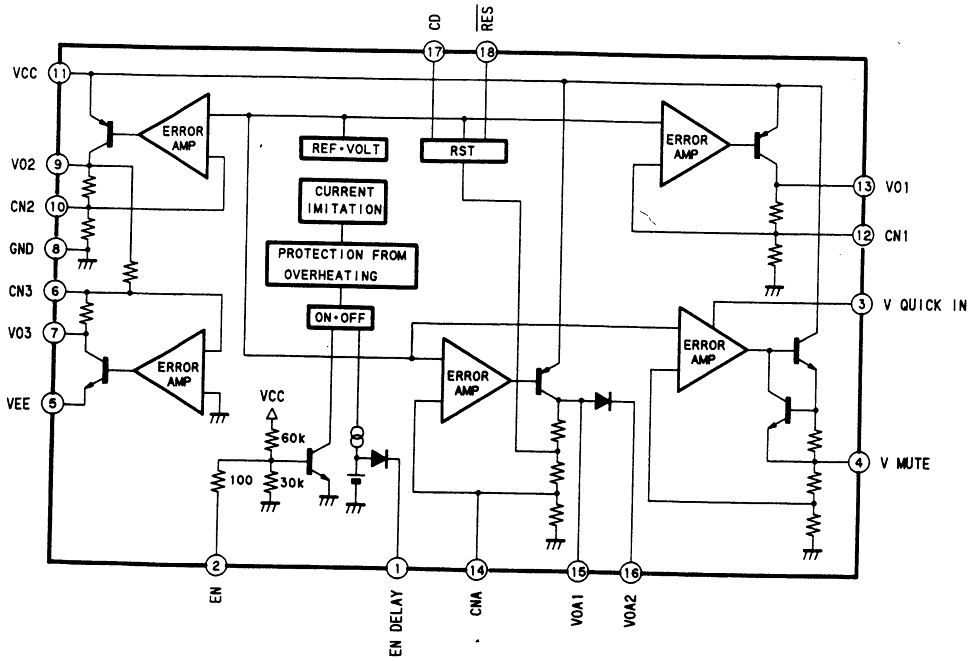
IC502 X24C01P


VCC
START CYCLE
H.V.GENERATOR TIMING & CONTROL
SDA
START STOP LOGIC
SCI
CONTROL LOGIC
LOAD
INC
WORD ADDRESS COUNTER
XDEC
32
E² PROM 61×61
5
2
32
YDEC
R/W
8
CK
PIN
DATA REGISTER
DREF ACK
VSS
DREF

IC504 XR1091DCP


OUT 63
OUT 160
OUT 400
OUT 1k
OUT 2.5k
OUT 6.3k
OUT 16k
OUT SUM
63Hz BAND PASS FILTER
160Hz BAND PASS FILTER
400Hz BAND PASS FILTER
1kHz BAND PASS FILTER
2.5kHz BAND PASS FILTER
6.3kHz BAND PASS FILTER
16kHz BAND PASS FILTER
CLOCK GENERATOR
LOW PASS FILTER
Σ
VDD
CLK/2
CLK R
CLK C
GND
L IN
R IN
VSS

IC901 LA5603


CD
RES
VCC
VO2
CN2
GND
CN3
VO3
VEE
ERROR AMP
REF·VOLT
RST
CURRENT IMITATION
PROTECTION FROM OVERHEATING
ON·OFF
VCC
60k
30k
100
VO1
CN1
V QUICK IN
V MUTE
EN
EN DELAY
CNA
VOA1
VOA2

3-11. PIN FUNCTION OF IC501 (μPD78134GF-051-3B9)

According to keying in or remote control signal, it sets the Graphic equalizer•electronic volume (IC201), AI BC, surround etc. and switches the LED and FL tube display and functions in the deck.

Pin No.	Pin name	I/O	Description
1	CLR0	I	Timer pulse input
2	+5V	I	Not in use with the equipment (+5V)
3	FL DATA	O	Serial data output to the FL tube driver (IC505, 506)
4	FL CLK	O	Data transfer clock output to the FL tube driver (IC505, 506)
5, 6	S0, S1	I	Input port for model selection. Connected to GND with the equipment.
7–12	+5V	I	Not in use with the equipment (+5V)
13	POT00	O	Timer pulse output (about 400μsec)
14	LED CLK	O	Data transfer clock output to the LED driver (IC507)
15	LED DATA	O	Serial data output to LED driver (IC507)
16	LED LATCH	O	Data latch output to the LED driver (IC507)
17, 18	NC	—	Not in use with the equipment (open)
19	AVSS	—	Analog system power terminal (GND)
20	AVREF	I	Analog port reference voltage input (+5V)
21, 22	KEY0, 1	I	Key input (Analog)*[1]
23, 24	SPE0, 1	I	Spectrum analysis data input (analog)
25	VOL DATA	I	Volume position data input (analog)
26–28	G	—	Not in use with the equipment (GND)
29	RESET	I	System reset input. "L" : reset
30	VDD	—	Power terminal (+5V)
31, 32	X1, X2	—	Crystal connection terminal for system clock oscillation
33	VSS	—	Power terminal (GND)
34	SPE A	O	Spectrum analysis data input switch A
35	SPE B	O	Spectrum analysis data input switch B
36	SPE INH	O	Spectrum analysis data input switch inhibit
37	AI BC A	O	AI BC output switch A
38	AI BC B	O	AI BC output switch B
39	AI BC INH	O	AI BC output switch inhibit
40, 41	NC	—	Not in use with the equipment (open)
42	SDL	O	Clock output to E^2P-ROM (IC502)
43	SDA	I/O	Data input/output (user preset memory data, etc.) with E^2P-ROM (IC502)
44	BACK UP	—	Not in use with the equipment (open)
45	AU BUS IN	I	Audio bus input
46	AU BUS OUT	O	Audio bus output (tuner power ON/OFF and instruction to the function switch microcomputer in the deck)
47	NC	—	Not in use with the equipment (open)
48	VOL DOWN	O	DOWN signal output of the volume motor (RV591)
49	VOL UP	O	UP signal output of the volume motor (RV591)
50	TC-FUNC	I	Request of audio bus (FUNCTION data) from the function switch microcomputer in the deck (TC-H3700)
51	RESET	O	Reset output to the Graphic equalizer•electronic volume (IC201). "L" : reset
52	LATCH	O	Data latch output to the Graphic equalizer•electronic volume (IC201)

Pin No.	Pin name	I/O	Description
53	CLK	O	Data transfer clock output to the Graphic equalizer•electronic volume (IC201)
54	DATA	O	Serial data output to the Graphic equalizer•electronic volume (IC201)
55	MUTE	O	Mute output
56	RY-ON	O	Speaker relay control
57	POWER ON/OFF	O	Power (IC901) output control. "L" : Power ON
58	NC	—	Not in use with the equipment (open)
59	SUR A	O	Surround control output switch A
60	SUR B	O	Surround control output switch B
61	SUR C	O	Surround control output switch C
62	SUR INH	O	Surround control output switch inhibit
63, 64	NC	—	Not in use with the equipment (open)
65	KARAOKE	O	Not in use with the equipment (open)
66	NC	—	Not in use with the equipment (open)
67	VSS	—	Power terminal (GND)
68	+5V	I	Not in use with the equipment (+5V)
69—76	NC	—	Not in use with the equipment (open)
77	VDD	—	Power terminal (+5V)
78	NC	—	Not in use with the equipment (open)
79	FL LATCH	O	Data latch output to the FL tube driver (IC505, 506)
80	NC	—	Not in use with the equipment (open)

*1 Key input (analog port)

Voltage (V) Input port	0	0.63	1.3	2.0	2.6	3.2
Pin ㉑ KEY 0	SYSTEM POWER S551	FUNCTION MAX> S552	FUNCTION <MIN S553	WAKE UP VOL SET S554	DISPLAY S555	—
Pin ㉒ KEY1	MUTING S561	DIRECT S562	MUSIC S563	T. P. O. S564	TOTAL EFFECT+ S565	TOTAL EFFECT− S566

SECTION 4
EXPLODED VIEW

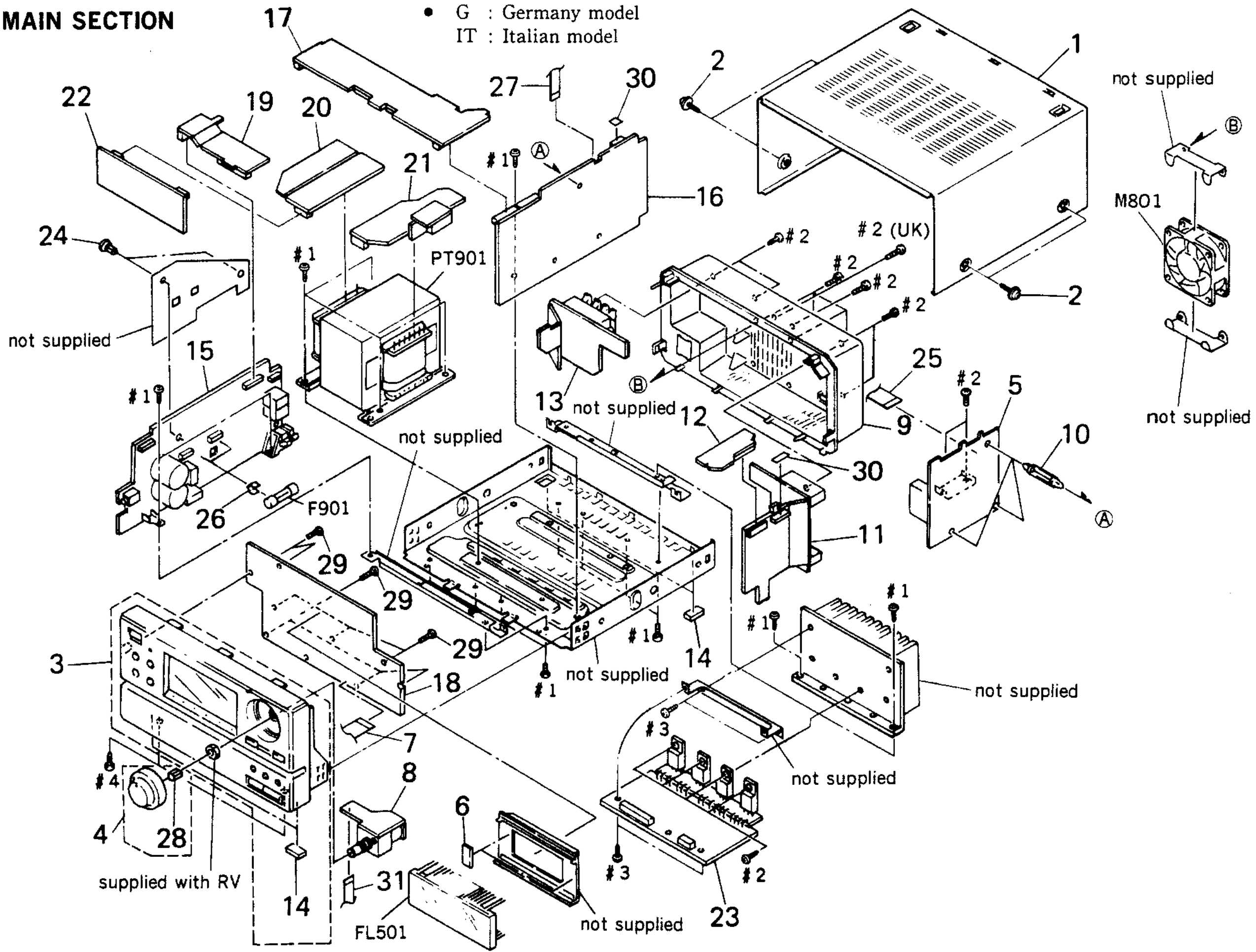
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-1. MAIN SECTION

- G : Germany model
  IT : Italian model


17
22
19
20
27
30
2
1
not supplied
Ⓑ
21
#1 Ⓐ
16
M801
24
PT901
#2
#2 (UK)
#2
#2
#2
2
#1
not supplied
15
#1
25
#2
5
13
not supplied
12
Ⓑ
9
10
not supplied
not supplied
30
26
F901
Ⓐ
29
11
29
#1
#1
3
29
#1
18
14
not supplied
#1
not supplied
#3
7
not supplied
#4
8
4
28
6
supplied with RV
#3
#2
31
14
FL501
not supplied
23

Ref. No.	Part No.	Description	Remark
* 1	4-944-522-21	CASE (K211522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4942-489-3	PANEL ASSY, FRONT	
4	X-4942-471-1	KNOB (VOLUME) ASSY	
* 5	A-4347-185-A	POWER BOARD, COMPLETE	
* 6	4-932-810-11	CUSHION (FL)	
7	1-690-994-11	WIRE (FLAT TYPE) (17 CORE)	
* 8	1-642-435-11	VOLUME BOARD	
* 9	4-948-766-21	PANEL, BACK (UK)	
* 9	4-948-766-51	PANEL, BACK (AEP, G, IT)	
* 10	4-385-948-01	HOLDER, PCB	
* 11	1-642-444-11	JACK BOARD	
* 12	1-642-447-11	CONNECTOR (A) BOARD	
* 13	1-642-445-11	SPEAKER BOARD	
14	4-930-336-21	FOOT (FELT)	
* 15	A-4347-187-A	AC BOARD, COMPLETE (AEP, UK)	
* 15	A-4347-188-A	AC BOARD, COMPLETE (G, IT)	
* 16	A-4347-175-A	AUDIO BOARD, COMPLETE (AEP, UK)	
* 16	A-4347-176-A	AUDIO BOARD, COMPLETE (G, IT)	
* 17	1-642-446-11	BRIDGE BOARD	
* 18	A-4347-179-A	PANEL BOARD, COMPLETE	
* 19	1-642-448-11	CONNECTOR (B) BOARD	
* 20	1-642-449-11	TRANSFORMER (A) BOARD	
* 21	1-642-450-11	TRANSFORMER (B) BOARD	
* 22	1-642-451-11	TRANSFORMER (C) BOARD	
* 23	A-4347-181-A	POWER AMP BOARD, COMPLETE (AEP, UK)	
* 23	A-4347-182-A	POWER AMP BOARD, COMPLETE (G, IT)	
24	4-812-134-11	RIVET NYLON, 3.5	
25	1-690-993-11	WIRE (FLAT TYPE) (13 CORE)	
* 26	1-533-213-31	HOLDER, FUSE	
27	1-690-992-11	WIRE (FLAT TYPE) (7 CORE)	
28	3-703-466-00	SPRING (6600)	
29	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
30	9-911-835-XX	SPACER	
31	1-590-240-11	WIRE (FLAT TYPE) (7 CORE)	
⚠F901	1-532-259-00	FUSE, TIME-LAG (T1.6A)	
FL501	1-519-720-11	INDICATOR TUBE, FLUORESCENT	
M801	1-541-953-11	MOTOR, DC FAN	
⚠PT901	1-450-793-11	TRANSFORMER, POWER (AEP, G, IT	
⚠PT901	1-450-794-11	TRANSFORMER, POWER (UK)	

AC **PANEL** **POWER**
POWER AMP **VOLUME**

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

- G : Germany model
  IT : Italian model

Ref. No.	Part No.	Description			Remark
*	A-4347-187-A	AC BOARD, COMPLETE (AEP, UK)			
*	A-4347-188-A	AC BOARD, COMPLETE (G, IT)			
		*************************			
*	A-4347-179-A	PANEL BOARD, COMPLETE			
		*********************			
*	A-4347-185-A	POWER BOARD, COMPLETE			
		*********************			
*	A-4347-181-A	POWER AMP BOARD, COMPLETE (AEP, UK)			
*	A-4347-182-A	POWER AMP BOARD, COMPLETE (G, IT)			
		********************************			
*	1-642-435-11	VOLUME BOARD			
		***********			
*	1-533-213-31	HOLDER, FUSE			
*	4-932-810-11	CUSHION (FL)			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			
		< CAPACITOR >			
C551	1-124-443-00	ELECT	100uF	20%	10V
C552	1-124-261-00	ELECT	10uF	20%	50V
C553	1-161-379-00	CERAMIC	0.01uF	20%	25V
C554	1-164-159-11	CERAMIC	0.1uF		50V
C555	1-161-379-00	CERAMIC	0.01uF	20%	25V
C556	1-164-159-11	CERAMIC	0.1uF		50V
C557	1-126-923-11	ELECT	220uF	20%	10V
C558	1-164-159-11	CERAMIC	0.1uF		50V
C559	1-164-159-11	CERAMIC	0.1uF		50V
C560	1-161-379-00	CERAMIC	0.01uF	20%	25V
C561	1-161-379-00	CERAMIC	0.01uF	20%	25V
C562	1-124-261-00	ELECT	10uF	20%	50V
C563	1-126-923-11	ELECT	220uF	20%	10V
C591	1-124-443-00	ELECT	100uF	20%	10V
C592	1-124-907-11	ELECT	10uF	20%	50V
C593	1-124-907-11	ELECT	10uF	20%	50V
C608	1-161-379-00	CERAMIC	0.01uF	20%	25V
C616	1-161-379-00	CERAMIC	0.01uF	20%	25V
C617	1-164-159-11	CERAMIC	0.1uF		50V
C658	1-161-379-00	CERAMIC	0.01uF	20%	25V
C690	1-164-159-11	CERAMIC	0.1uF		50V
C702	1-126-176-11	ELECT	220uF	20%	10V
C704	1-162-306-11	CERAMIC	0.01uF	20%	16V
C706	1-124-927-11	ELECT	4.7uF	20%	100V

Ref. No.	Part No.	Description			Remark
C707	1-124-478-11	ELECT	100uF	20%	25V
C708	1-124-907-11	ELECT	10uF	20%	50V
C709	1-164-159-11	CERAMIC	0.1uF		50V
C710	1-124-910-11	ELECT	47uF	20%	50V
C711	1-164-159-11	CERAMIC	0.1uF		50V
C712	1-164-159-11	CERAMIC	0.1uF		50V
C801	1-124-907-11	ELECT	10uF	20%	50V
C802	1-162-282-31	CERAMIC	100PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-124-443-00	ELECT	100uF	20%	10V
C806	1-136-165-00	FILM	0.1uF	5%	50V
C807	1-136-165-00	FILM	0.1uF	5%	50V
C808	1-136-165-00	FILM	0.1uF	5%	50V
C809	1-136-165-00	FILM	0.1uF	5%	50V
C811	1-164-159-11	CERAMIC	0.1uF		50V
C821	1-124-907-11	ELECT	10uF	20%	50V
C822	1-162-282-31	CERAMIC	100PF	10%	50V
C823	1-162-282-31	CERAMIC	100PF	10%	50V
C824	1-124-443-00	ELECT	100uF	20%	10V
C828	1-136-165-00	FILM	0.1uF	5%	50V
C829	1-136-165-00	FILM	0.1uF	5%	50V
C851	1-124-907-11	ELECT	10uF	20%	50V
C852	1-162-282-31	CERAMIC	100PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-124-443-00	ELECT	100uF	20%	10V
C856	1-136-165-00	FILM	0.1uF	5%	50V
C857	1-136-165-00	FILM	0.1uF	5%	50V
C858	1-136-165-00	FILM	0.1uF	5%	50V
C859	1-136-165-00	FILM	0.1uF	5%	50V
C861	1-164-159-11	CERAMIC	0.1uF		50V
C871	1-124-907-11	ELECT	10uF	20%	50V
C872	1-162-282-31	CERAMIC	100PF	10%	50V
C873	1-162-282-31	CERAMIC	100PF	10%	50V
C874	1-124-443-00	ELECT	100uF	20%	10V
C878	1-136-165-00	FILM	0.1uF	5%	50V
C879	1-136-165-00	FILM	0.1uF	5%	50V
C881	1-164-159-11	CERAMIC	0.1uF		50V
C901	1-126-224-11	ELECT	4700uF	20%	42V
C902	1-126-224-11	ELECT	4700uF	20%	42V
C903	1-136-171-00	FILM	0.33uF	5%	50V

Ref. No.	Part No.	Description	Remark
C904	1-136-171-00	FILM 0.33uF 5% 50V	
C911	1-124-563-11	ELECT 2200uF 20% 25V	
C912	1-124-563-11	ELECT 2200uF 20% 25V	
C913	1-136-165-00	FILM 0.1uF 5% 50V	
C914	1-136-165-00	FILM 0.1uF 5% 50V	
C920	1-164-159-11	CERAMIC 0.1uF 50V	
C921	1-124-903-11	ELECT 1uF 20% 50V	
C922	1-124-443-00	ELECT 100uF 20% 10V	
C923	1-124-903-11	ELECT 1uF 20% 50V	
C924	1-124-443-00	ELECT 100uF 20% 10V	
C925	1-124-903-11	ELECT 1uF 20% 50V	
C926	1-124-443-00	ELECT 100uF 20% 10V	
C927	1-124-903-11	ELECT 1uF 20% 50V	
C928	1-124-443-00	ELECT 100uF 20% 10V	
C929	1-124-903-11	ELECT 1uF 20% 50V	
C930	1-124-907-11	ELECT 10uF 20% 50V	
C931	1-126-105-11	ELECT 1000uF 20% 35V	
C932	1-126-105-11	ELECT 1000uF 20% 35V	
C933	1-124-907-11	ELECT 10uF 20% 50V	
C934	1-124-477-11	ELECT 47uF 20% 25V	
C941	1-124-122-11	ELECT 100uF 20% 50V	
C942	1-124-907-11	ELECT 10uF 20% 50V	
C943	1-124-907-11	ELECT 10uF 20% 50V	
C944	1-124-903-11	ELECT 1uF 20% 50V	
C951	1-124-122-11	ELECT 100uF 20% 50V	
C952	1-124-907-11	ELECT 10uF 20% 50V	
C953	1-124-907-11	ELECT 10uF 20% 50V	
C954	1-164-159-11	CERAMIC 0.1uF 50V	
C961	1-124-477-11	ELECT 47uF 20% 25V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN301	1-569-505-11	PIN, CONNECTOR 10P	
CN302	1-568-443-11	SOCKET, CONNECTOR 13P	
CN303	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P	
CN501	1-568-440-11	SOCKET, CONNECTOR 17P	
CN591	1-568-439-11	SOCKET, CONNECTOR 7P	
CN801	1-568-437-11	SOCKET, CONNECTOR 7P	
* CN802	1-573-087-11	PIN, CONNECTOR 13P	
* CN831	1-573-087-11	PIN, CONNECTOR 13P	
CN832	1-566-128-11	CONNECTOR, BOARD TO BOARD 10P	
⚠CN901	1-526-931-11	INLET, AC (~AC IN)	
* CN902	1-580-940-11	PIN, CONNECTOR 4P	
* CN904	1-569-502-11	PIN, CONNECTOR 7P	
CN905	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D551	8-719-987-63	DIODE 1N4148M	
D571	8-719-301-37	LED SEL2210S-CD (ON/STANDBY)	
D572	8-719-301-37	LED SEL2210S-CD (WAKE UP VOL SET)	
D573	8-719-301-37	LED SEL2210S-CD (MUTING)	
D574	8-719-301-37	LED SEL2210S-CD (PHONO)	
D575	8-719-301-37	LED SEL2210S-CD (TUNER)	
D576	8-719-301-37	LED SEL2210S-CD (CD)	
D577	8-719-301-37	LED SEL2210S-CD (DAT)	
D578	8-719-301-37	LED SEL2210S-CD (TAPE)	
D579	8-719-301-37	LED SEL2210S-CD (VIDEO)	
D591	8-719-987-63	DIODE 1N4148M	
D703	8-719-987-63	DIODE 1N4148M	
D704	8-719-987-63	DIODE 1N4148M	
D705	8-719-987-63	DIODE 1N4148M	
D706	8-719-987-63	DIODE 1N4148M	
D791	8-719-987-63	DIODE 1N4148M	
D800	8-719-987-63	DIODE 1N4148M	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D821	8-719-987-63	DIODE 1N4148M	
D822	8-719-987-63	DIODE 1N4148M	
D851	8-719-987-63	DIODE 1N4148M	
D852	8-719-987-63	DIODE 1N4148M	
D871	8-719-987-63	DIODE 1N4148M	
D872	8-719-987-63	DIODE 1N4148M	
D901	8-719-302-38	DIODE RBV-602-01	
D902	8-719-987-63	DIODE 1N4148M	
D903	8-719-987-63	DIODE 1N4148M	
D911	8-719-200-82	DIODE 11ES2	
D912	8-719-200-82	DIODE 11ES2	
D913	8-719-200-82	DIODE 11ES2	
D914	8-719-200-82	DIODE 11ES2	
D931	8-719-200-82	DIODE 11ES2	
D932	8-719-200-82	DIODE 11ES2	
D941	8-719-200-82	DIODE 11ES2	
D942	8-719-002-67	DIODE UZL-33H	
D943	8-719-987-63	DIODE 1N4148M	
D944	8-719-987-63	DIODE 1N4148M	
D951	8-719-200-82	DIODE 11ES2	
D952	8-719-934-22	DIODE HZS30-2L	
D953	8-719-933-33	DIODE HZS6A1L	
D961	8-719-987-63	DIODE 1N4148M	
D962	8-719-987-63	DIODE 1N4148M	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL501	1-519-720-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC505	8-759-512-44	IC SN755703	
IC506	8-759-512-44	IC SN755703	
IC507	8-759-636-56	IC M66311FP	
IC508	8-759-916-14	IC SN74HC04N	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

AC PANEL POWER POWER AMP VOLUME

Ref. No.	Part No.	Description	Remark
IC591	8-759-820-62	IC LB1639	
IC701	8-759-111-68	IC uPC1237HA	
IC702	8-759-987-16	IC LM393P	
IC703	8-759-512-73	IC LM35DZ-SL	
IC801	8-759-069-56	IC LM3875-Q	
IC821	8-759-069-56	IC LM3875-Q	
IC851	8-759-069-56	IC LM3875-Q	
IC871	8-759-069-56	IC LM3875-Q	
IC901	8-759-823-46	IC LA5603	
IC902	8-759-604-39	IC AN6291	
		< JACK >	
J601	1-562-837-21	JACK (HEADPHONES)	
		< COIL >	
* L801	1-420-872-00	COIL, AIR CORE	
* L821	1-420-872-00	COIL, AIR CORE	
* L851	1-420-872-00	COIL, AIR CORE	
* L871	1-420-872-00	COIL, AIR CORE	
		< LINE FILTER >	
⚠LF901	1-424-458-11	TRANSFORMER, LINE FILTER (G, IT)	
		< TRANSISTOR >	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q781	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q791	8-729-118-01	TRANSISTOR 2SB1116	
Q792	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q821	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q841	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q871	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q921	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q941	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q942	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q943	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q951	8-729-118-01	TRANSISTOR 2SB1116	
Q961	8-729-111-29	TRANSISTOR 2SD1616A-K	
		< RESISTOR >	
R551	1-249-423-11	CARBON 3.3K 5% 1/4W	
R552	1-249-413-11	CARBON 470 5% 1/4W	
R553	1-249-415-11	CARBON 680 5% 1/4W	
R554	1-249-417-11	CARBON 1K 5% 1/4W	
R555	1-249-419-11	CARBON 1.5K 5% 1/4W	
R561	1-249-423-11	CARBON 3.3K 5% 1/4W	
R562	1-249-413-11	CARBON 470 5% 1/4W	
R563	1-249-415-11	CARBON 680 5% 1/4W	
R564	1-249-417-11	CARBON 1K 5% 1/4W	
R565	1-249-419-11	CARBON 1.5K 5% 1/4W	
R566	1-249-421-11	CARBON 2.2K 5% 1/4W	
R571	1-249-411-11	CARBON 330 5% 1/4W	
R572	1-249-411-11	CARBON 330 5% 1/4W	
R573	1-249-411-11	CARBON 330 5% 1/4W	
R574	1-249-411-11	CARBON 330 5% 1/4W	
R581	1-249-417-11	CARBON 1K 5% 1/4W	
R582	1-249-417-11	CARBON 1K 5% 1/4W	
R583	1-249-417-11	CARBON 1K 5% 1/4W	
R584	1-249-417-11	CARBON 1K 5% 1/4W	
R585	1-249-417-11	CARBON 1K 5% 1/4W	
R586	1-249-417-11	CARBON 1K 5% 1/4W	
R587	1-249-417-11	CARBON 1K 5% 1/4W	
R588	1-249-441-11	CARBON 100K 5% 1/4W	
R589	1-249-417-11	CARBON 1K 5% 1/4W	
R591	1-249-417-11	CARBON 1K 5% 1/4W	
R592	1-249-417-11	CARBON 1K 5% 1/4W	
R593	1-249-414-11	CARBON 560 5% 1/4W	
R594	1-249-431-11	CARBON 15K 5% 1/4W	
R608	1-249-399-11	CARBON 33 5% 1/4W	
R619	1-249-429-11	CARBON 10K 5% 1/4W	
R658	1-249-399-11	CARBON 33 5% 1/4W	
R701	1-249-433-11	CARBON 22K 5% 1/4W	
R702	1-249-441-11	CARBON 100K 5% 1/4W	
R703	1-249-433-11	CARBON 22K 5% 1/4W	
R704	1-249-433-11	CARBON 22K 5% 1/4W	
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-441-11	CARBON 100K 5% 1/4W	
R707	1-249-429-11	CARBON 10K 5% 1/4W	
R708	1-249-424-11	CARBON 3.9K 5% 1/4W	
R709	1-249-427-11	CARBON 6.8K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R712	1-249-436-11	CARBON 39K 5% 1/4W	
R713	1-249-441-11	CARBON 100K 5% 1/4W	
R714	1-249-417-11	CARBON 1K 5% 1/4W	
⚠R715	1-212-857-00	FUSIBLE 10 5% 1/4W	
⚠R717	1-212-982-00	FUSIBLE 100 5% 1/2W	
R781	1-249-429-11	CARBON 10K 5% 1/4W	
R782	1-249-405-11	CARBON 100 5% 1/4W	
R791	1-249-417-11	CARBON 1K 5% 1/4W	
R792	1-249-429-11	CARBON 10K 5% 1/4W	
R793	1-249-441-11	CARBON 100K 5% 1/4W	
R794	1-249-433-11	CARBON 22K 5% 1/4W	
⚠R800	1-212-982-00	FUSIBLE 100 5% 1/2W	
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-429-11	CARBON 10K 5% 1/4W	
R803	1-249-417-11	CARBON 1K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R804	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R805	1-217-151-00	RES, METAL PLATE 0.22 2W	
R806	1-249-417-11	CARBON 1K 5% 1/4W	
R807	1-249-431-11	CARBON 15K 5% 1/4W	
R808	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R809	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R810	1-249-439-11	CARBON 68K 5% 1/4W	
R811	1-249-429-11	CARBON 10K 5% 1/4W	
R821	1-249-417-11	CARBON 1K 5% 1/4W	
R822	1-249-429-11	CARBON 10K 5% 1/4W	
R823	1-249-414-11	CARBON 560 5% 1/4W	
R824	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R825	1-217-151-00	RES, METAL PLATE 0.22 2W	
R826	1-249-417-11	CARBON 1K 5% 1/4W	
R827	1-249-431-11	CARBON 15K 5% 1/4W	
R828	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R829	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R830	1-249-437-11	CARBON 47K 5% 1/4W	
R831	1-249-429-11	CARBON 10K 5% 1/4W	
R841	1-249-441-11	CARBON 100K 5% 1/4W	
R842	1-249-405-11	CARBON 100 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-429-11	CARBON 10K 5% 1/4W	
R853	1-249-417-11	CARBON 1K 5% 1/4W	
R854	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R855	1-217-151-00	RES, METAL PLATE 0.22 2W	
R856	1-249-417-11	CARBON 1K 5% 1/4W	
R857	1-249-431-11	CARBON 15K 5% 1/4W	
R858	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R859	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R860	1-249-438-11	CARBON 56K 5% 1/4W	
R861	1-249-429-11	CARBON 10K 5% 1/4W	
R871	1-249-417-11	CARBON 1K 5% 1/4W	
R872	1-249-429-11	CARBON 10K 5% 1/4W	
R873	1-249-414-11	CARBON 560 5% 1/4W	
R874	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R875	1-217-151-00	RES, METAL PLATE 0.22 2W	
R876	1-249-417-11	CARBON 1K 5% 1/4W	
R877	1-249-431-11	CARBON 15K 5% 1/4W	
R878	1-249-441-11	CARBON 100K 5% 1/4W	
⚠R879	1-212-958-00	FUSIBLE 10 5% 1/2W	F
R880	1-249-436-11	CARBON 39K 5% 1/4W	
R881	1-249-429-11	CARBON 10K 5% 1/4W	
R902	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R911	1-219-134-11	FUSIBLE 0.1 5% 1/4W	F
⚠R912	1-219-134-11	FUSIBLE 0.1 5% 1/4W	F
R921	1-249-437-11	CARBON 47K 5% 1/4W	
R922	1-249-405-11	CARBON 100 5% 1/4W	
R923	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R941	1-249-429-11	CARBON 10K 5% 1/4W	
⚠R942	1-212-942-00	FUSIBLE 2.2 5% 1/2W	F
R943	1-249-417-11	CARBON 1K 5% 1/4W	
R944	1-249-429-11	CARBON 10K 5% 1/4W	
R945	1-249-441-11	CARBON 100K 5% 1/4W	
R946	1-249-441-11	CARBON 100K 5% 1/4W	
R947	1-249-417-11	CARBON 1K 5% 1/4W	
R951	1-249-429-11	CARBON 10K 5% 1/4W	
R952	1-249-425-11	CARBON 4.7K 5% 1/4W	
R953	1-249-405-11	CARBON 100 5% 1/4W	
R961	1-249-429-11	CARBON 10K 5% 1/4W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV591	1-241-803-11	RES, VAR, CARBON(WITH MOTOR) 10K (VOLUME)	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY801	1-515-790-11	RELAY	
RY802	1-515-790-11	RELAY	
RY901	1-515-626-11	RELAY	
RY902	1-515-626-11	RELAY	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S551	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S552	1-554-303-21	SWITCH, TACTILE (FUNCTION MAX >)	
S553	1-554-303-21	SWITCH, TACTILE (FUNCTION < MIN)	
S554	1-554-303-21	SWITCH, TACTILE (WAKE UP VOL SET)	
S555	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S561	1-554-303-21	SWITCH, TACTILE (MUTING)	
S562	1-554-303-21	SWITCH, TACTILE (DIRECT)	
S563	1-554-303-21	SWITCH, TACTILE (MUSIC)	
S564	1-554-303-21	SWITCH, TACTILE (T.P.O.)	
S565	1-554-303-21	SWITCH, TACTILE (TOTAL EFFECT +)	
S566	1-554-303-21	SWITCH, TACTILE (TOTAL EFFECT -)	

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Ref. No.	Part No.	Description	Remark
*	A-4347-175-A	AUDIO BOARD, COMPLETE (AEP, UK)	
*	A-4347-176-A	AUDIO BOARD, COMPLETE (G, IT)	

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< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C101	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C102	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C103	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C121	1-164-346-11	CERAMIC CHIP 1uF 16V	
C122	1-164-346-11	CERAMIC CHIP 1uF 16V	
C123	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C124	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C141	1-126-157-11	ELECT 10uF 20% 16V	
C151	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

AUDIO

Ref. No.	Part No.	Description			Remark
C152	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C153	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C201	1-124-907-11	ELECT	10uF	20%	50V
C202	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C203	1-124-907-11	ELECT	10uF	20%	50V
C204	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C205	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C206	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C207	1-164-346-11	CERAMIC CHIP	1uF		16V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-124-443-00	ELECT	100uF	20%	10V
C211	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C212	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C213	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C214	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C215	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C216	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C217	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C221	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C222	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C223	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C224	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C225	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C226	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C227	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C231	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C232	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C233	1-124-443-00	ELECT	100uF	20%	10V
C234	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C251	1-124-907-11	ELECT	10uF	20%	50V
C252	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C253	1-124-907-11	ELECT	10uF	20%	50V
C254	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C256	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C257	1-164-346-11	CERAMIC CHIP	1uF		16V
C258	1-164-346-11	CERAMIC CHIP	1uF		16V
C261	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C262	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C263	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C264	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C265	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C266	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C267	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C271	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C272	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C273	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C274	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C275	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V

Ref. No.	Part No.	Description			Remark
C276	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C277	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C281	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C282	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C291	1-124-443-00	ELECT	100uF	20%	10V
C292	1-124-443-00	ELECT	100uF	20%	10V
C293	1-124-443-00	ELECT	100uF	20%	10V
C294	1-124-443-00	ELECT	100uF	20%	10V
C295	1-124-443-00	ELECT	100uF	20%	10V
C301	1-136-165-00	FILM	0.1uF	5%	50V
C302	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-124-903-11	ELECT	1uF	20%	50V
C305	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C307	1-124-443-00	ELECT	100uF	20%	10V
C309	1-124-907-11	ELECT	10uF	20%	50V
C310	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C311	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C331	1-124-463-00	ELECT	0.1uF	20%	50V
C351	1-136-165-00	FILM	0.1uF	5%	50V
C352	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-124-903-11	ELECT	1uF	20%	50V
C355	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C357	1-124-443-00	ELECT	100uF	20%	10V
C359	1-124-907-11	ELECT	10uF	20%	50V
C360	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C361	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C411	1-136-157-00	FILM	0.022uF	5%	50V
C412	1-136-157-00	FILM	0.022uF	5%	50V
C413	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C414	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C415	1-136-165-00	FILM	0.1uF	5%	50V
C423	1-136-165-00	FILM	0.1uF	5%	50V
C424	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C425	1-124-907-11	ELECT	10uF	20%	50V
C461	1-136-157-00	FILM	0.022uF	5%	50V
C462	1-136-157-00	FILM	0.022uF	5%	50V
C463	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C464	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C465	1-136-165-00	FILM	0.1uF	5%	50V
C473	1-136-165-00	FILM	0.1uF	5%	50V
C474	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C475	1-124-907-11	ELECT	10uF	20%	50V
C501	1-124-443-00	ELECT	100uF	20%	10V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C503	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C505	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C506	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C511	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C512	1-124-443-00	ELECT	100uF	20%	10V
C513	1-124-443-00	ELECT	100uF	20%	10V
C514	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C515	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C522	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C523	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C524	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C525	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C526	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C531	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C541	1-124-443-00	ELECT	100uF	20%	10V
C542	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C543	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C601	1-124-907-11	ELECT	10uF	20%	50V
C602	1-124-443-00	ELECT	100uF	20%	10V
C603	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C604	1-126-926-11	ELECT	1000uF	20%	10V
C605	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C607	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C651	1-124-907-11	ELECT	10uF	20%	50V
C652	1-124-443-00	ELECT	100uF	20%	10V
C653	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C654	1-126-926-11	ELECT	1000uF	20%	10V
C655	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C657	1-163-117-00	CERAMIC CHIP	100PF	5%	50V

< CONNECTOR >

CN201	1-566-128-11	CONNECTOR, BOARD TO BOARD 10P
CN202	1-568-437-11	SOCKET, CONNECTOR 7P
CN203	1-568-443-11	SOCKET, CONNECTOR 13P
CN204	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P
CN205	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P

< DIODE >

D231	8-719-801-78	DIODE	1SS184
D291	8-719-801-78	DIODE	1SS184
D292	8-719-801-78	DIODE	1SS184
D341	8-719-801-78	DIODE	1SS184
D342	8-719-801-78	DIODE	1SS184
D501	8-719-801-78	DIODE	1SS184
D502	8-719-801-78	DIODE	1SS184
D503	8-719-801-78	DIODE	1SS184
D504	8-719-801-78	DIODE	1SS184
D511	8-719-801-78	DIODE	1SS184
D512	8-719-801-78	DIODE	1SS184
D541	8-719-801-78	DIODE	1SS184
D601	8-719-801-78	DIODE	1SS184

< IC >

Ref. No.	Part No.	Description		Remark
IC101	8-759-636-55	IC	M5218AFP	
IC103	8-759-516-40	IC	CD4051BCM	
IC201	8-759-636-57	IC	CXA1492Q	
IC301	8-759-636-55	IC	M5218AFP	
IC302	8-759-516-43	IC	CD4053BCM	
IC303	8-759-516-41	IC	CD4052BCM	
IC411	8-759-636-55	IC	M5218AFP	
IC421	8-759-636-55	IC	M5218AFP	
IC501	8-759-074-78	IC	uPD78134GF-051-3B9	
IC502	8-759-500-31	IC	X24C01P	
IC503	8-759-516-41	IC	CD4052BCM	
IC504	8-759-991-11	IC	XR1091DCP	
IC601	8-759-636-55	IC	M5218AFP	

< JUMPER RESISTOR >

JR1	1-216-296-00	METAL CHIP	0	5%	1/8W
JR2	1-216-296-00	METAL CHIP	0	5%	1/8W
JR5	1-216-296-00	METAL CHIP	0	5%	1/8W
JR6	1-216-296-00	METAL CHIP	0	5%	1/8W
JR7	1-216-296-00	METAL CHIP	0	5%	1/8W
JR8	1-216-296-00	METAL CHIP	0	5%	1/8W
JR501	1-216-295-00	METAL CHIP	0	5%	1/10W
JR503	1-216-295-00	METAL CHIP	0	5%	1/10W

< TRANSISTOR >

Q231	8-729-620-06	TRANSISTOR	2SC3052-EF
Q232	8-729-620-06	TRANSISTOR	2SC3052-EF
Q291	8-729-620-06	TRANSISTOR	2SC3052-EF
Q292	8-729-600-22	TRANSISTOR	2SA1235-F
Q311	8-729-620-06	TRANSISTOR	2SC3052-EF
Q341	8-729-620-06	TRANSISTOR	2SC3052-EF
Q342	8-729-620-06	TRANSISTOR	2SC3052-EF
Q361	8-729-620-06	TRANSISTOR	2SC3052-EF
Q391	8-729-620-06	TRANSISTOR	2SC3052-EF
Q501	8-729-620-06	TRANSISTOR	2SC3052-EF
Q502	8-729-805-67	TRANSISTOR	2SA1342
Q504	8-729-805-67	TRANSISTOR	2SA1342
Q506	8-729-805-43	TRANSISTOR	2SC3396
Q507	8-729-805-40	TRANSISTOR	2SC3900
Q601	8-729-620-06	TRANSISTOR	2SC3052-EF
Q651	8-729-620-06	TRANSISTOR	2SC3052-EF

< RESISTOR >

R101	1-216-089-00	METAL CHIP	47K	5%	1/10W
R102	1-216-085-00	METAL CHIP	33K	5%	1/10W
R114	1-216-085-00	METAL CHIP	33K	5%	1/10W
R121	1-216-121-00	METAL CHIP	1M	5%	1/10W

AUDIO

Ref. No.	Part No.	Description			Remark
R122	1-216-121-00	METAL CHIP	1M	5%	1/10W
R130	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R131	1-216-089-00	METAL CHIP	47K	5%	1/10W
R132	1-216-085-00	METAL CHIP	33K	5%	1/10W
R133	1-216-081-00	METAL CHIP	22K	5%	1/10W
R134	1-216-077-00	METAL CHIP	15K	5%	1/10W
R135	1-216-073-00	METAL CHIP	10K	5%	1/10W
R136	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R137	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R138	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W
R151	1-216-089-00	METAL CHIP	47K	5%	1/10W
R152	1-216-085-00	METAL CHIP	33K	5%	1/10W
R164	1-216-085-00	METAL CHIP	33K	5%	1/10W
R201	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-049-00	METAL CHIP	1K	5%	1/10W
R205	1-216-073-00	METAL CHIP	10K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-049-00	METAL CHIP	1K	5%	1/10W
R208	1-216-049-00	METAL CHIP	1K	5%	1/10W
R209	1-216-049-00	METAL CHIP	1K	5%	1/10W
R210	1-216-049-00	METAL CHIP	1K	5%	1/10W
R211	1-216-121-00	METAL CHIP	1M	5%	1/10W
R212	1-216-121-00	METAL CHIP	1M	5%	1/10W
R213	1-216-121-00	METAL CHIP	1M	5%	1/10W
R214	1-216-121-00	METAL CHIP	1M	5%	1/10W
R215	1-216-121-00	METAL CHIP	1M	5%	1/10W
R216	1-216-121-00	METAL CHIP	1M	5%	1/10W
R217	1-216-121-00	METAL CHIP	1M	5%	1/10W
R231	1-216-073-00	METAL CHIP	10K	5%	1/10W
R232	1-216-085-00	METAL CHIP	33K	5%	1/10W
R233	1-216-049-00	METAL CHIP	1K	5%	1/10W
R234	1-216-097-00	METAL CHIP	100K	5%	1/10W
R235	1-216-049-00	METAL CHIP	1K	5%	1/10W
R236	1-216-049-00	METAL CHIP	1K	5%	1/10W
R237	1-216-049-00	METAL CHIP	1K	5%	1/10W
R238	1-216-049-00	METAL CHIP	1K	5%	1/10W
R240	1-216-295-00	METAL CHIP	0	5%	1/10W
R251	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R252	1-216-073-00	METAL CHIP	10K	5%	1/10W
R253	1-216-073-00	METAL CHIP	10K	5%	1/10W
R254	1-216-049-00	METAL CHIP	1K	5%	1/10W
R255	1-216-073-00	METAL CHIP	10K	5%	1/10W
R256	1-216-073-00	METAL CHIP	10K	5%	1/10W
R261	1-216-121-00	METAL CHIP	1M	5%	1/10W
R262	1-216-121-00	METAL CHIP	1M	5%	1/10W
R263	1-216-121-00	METAL CHIP	1M	5%	1/10W
R264	1-216-121-00	METAL CHIP	1M	5%	1/10W
R265	1-216-121-00	METAL CHIP	1M	5%	1/10W
R266	1-216-121-00	METAL CHIP	1M	5%	1/10W
R267	1-216-121-00	METAL CHIP	1M	5%	1/10W
R281	1-216-073-00	METAL CHIP	10K	5%	1/10W
R282	1-216-085-00	METAL CHIP	33K	5%	1/10W
R283	1-216-049-00	METAL CHIP	1K	5%	1/10W
R291	1-216-049-00	METAL CHIP	1K	5%	1/10W
R292	1-216-049-00	METAL CHIP	1K	5%	1/10W
R301	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R302	1-216-109-00	METAL CHIP	330K	5%	1/10W
R303	1-216-295-00	METAL CHIP	0	5%	1/10W
R304	1-216-079-00	METAL CHIP	18K	5%	1/10W
R308	1-216-105-00	METAL CHIP	220K	5%	1/10W
R309	1-216-085-00	METAL CHIP	33K	5%	1/10W
R312	1-216-095-00	METAL CHIP	82K	5%	1/10W
R313	1-216-105-00	METAL CHIP	220K	5%	1/10W
R315	1-216-121-00	METAL CHIP	1M	5%	1/10W
R316	1-216-097-00	METAL CHIP	100K	5%	1/10W
R331	1-216-097-00	METAL CHIP	100K	5%	1/10W
R341	1-216-121-00	METAL CHIP	1M	5%	1/10W
R342	1-216-049-00	METAL CHIP	1K	5%	1/10W
R343	1-216-049-00	METAL CHIP	1K	5%	1/10W
R344	1-216-097-00	METAL CHIP	100K	5%	1/10W
R345	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R352	1-216-109-00	METAL CHIP	330K	5%	1/10W
R353	1-216-295-00	METAL CHIP	0	5%	1/10W
R354	1-216-079-00	METAL CHIP	18K	5%	1/10W
R358	1-216-105-00	METAL CHIP	220K	5%	1/10W
R359	1-216-085-00	METAL CHIP	33K	5%	1/10W
R362	1-216-095-00	METAL CHIP	82K	5%	1/10W
R363	1-216-105-00	METAL CHIP	220K	5%	1/10W
R365	1-216-121-00	METAL CHIP	1M	5%	1/10W
R366	1-216-097-00	METAL CHIP	100K	5%	1/10W
R391	1-216-121-00	METAL CHIP	1M	5%	1/10W
R392	1-216-049-00	METAL CHIP	1K	5%	1/10W
R393	1-216-049-00	METAL CHIP	1K	5%	1/10W
R411	1-216-079-00	METAL CHIP	18K	5%	1/10W
R412	1-216-097-00	METAL CHIP	100K	5%	1/10W
R413	1-216-076-00	METAL CHIP	13K	5%	1/10W
R421	1-216-295-00	METAL CHIP	0	5%	1/10W
R422	1-216-295-00	METAL CHIP	0	5%	1/10W
R423	1-216-079-00	METAL CHIP	18K	5%	1/10W
R424	1-216-121-00	METAL CHIP	1M	5%	1/10W
R461	1-216-079-00	METAL CHIP	18K	5%	1/10W
R462	1-216-097-00	METAL CHIP	100K	5%	1/10W
R463	1-216-076-00	METAL CHIP	13K	5%	1/10W
R471	1-216-295-00	METAL CHIP	0	5%	1/10W

AUDIO BRIDGE CONNECTOR (A) CONNECTOR (B) JACK SPEAKER TRANSFORMER (A) TRANSFORMER (B) TRANSFORMER (C)

Ref. No.	Part No.	Description			Remark
R472	1-216-295-00	METAL CHIP	0	5%	1/10W
R473	1-216-079-00	METAL CHIP	18K	5%	1/10W
R474	1-216-121-00	METAL CHIP	1M	5%	1/10W
R501	1-216-121-00	METAL CHIP	1M	5%	1/10W
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504	1-216-049-00	METAL CHIP	1K	5%	1/10W
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W
R506	1-216-089-00	METAL CHIP	47K	5%	1/10W
R507	1-216-089-00	METAL CHIP	47K	5%	1/10W
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-089-00	METAL CHIP	47K	5%	1/10W
R510	1-216-049-00	METAL CHIP	1K	5%	1/10W
R511	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R512	1-216-049-00	METAL CHIP	1K	5%	1/10W
R513	1-216-009-00	METAL CHIP	22	5%	1/10W
R514	1-216-009-00	METAL CHIP	22	5%	1/10W
R521	1-216-049-00	METAL CHIP	1K	5%	1/10W
R522	1-216-049-00	METAL CHIP	1K	5%	1/10W
R523	1-216-049-00	METAL CHIP	1K	5%	1/10W
R524	1-216-049-00	METAL CHIP	1K	5%	1/10W
R525	1-216-049-00	METAL CHIP	1K	5%	1/10W
R526	1-216-049-00	METAL CHIP	1K	5%	1/10W
R527	1-216-049-00	METAL CHIP	1K	5%	1/10W
R531	1-216-049-00	METAL CHIP	1K	5%	1/10W
R532	1-216-049-00	METAL CHIP	1K	5%	1/10W
R533	1-216-049-00	METAL CHIP	1K	5%	1/10W
R534	1-216-049-00	METAL CHIP	1K	5%	1/10W
R535	1-216-049-00	METAL CHIP	1K	5%	1/10W
R536	1-216-049-00	METAL CHIP	1K	5%	1/10W
R537	1-216-049-00	METAL CHIP	1K	5%	1/10W
R538	1-216-049-00	METAL CHIP	1K	5%	1/10W
R541	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R542	1-216-097-00	METAL CHIP	100K	5%	1/10W
R543	1-216-049-00	METAL CHIP	1K	5%	1/10W
R601	1-216-075-00	METAL CHIP	12K	5%	1/10W
R602	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R603	1-216-075-00	METAL CHIP	12K	5%	1/10W
R604	1-216-017-00	METAL CHIP	47	5%	1/10W
R605	1-216-049-00	METAL CHIP	1K	5%	1/10W
R606	1-216-049-00	METAL CHIP	1K	5%	1/10W
R607	1-216-121-00	METAL CHIP	1M	5%	1/10W
R608	1-216-097-00	METAL CHIP	100K	5%	1/10W
R651	1-216-075-00	METAL CHIP	12K	5%	1/10W
R652	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R653	1-216-075-00	METAL CHIP	12K	5%	1/10W
R654	1-216-017-00	METAL CHIP	47	5%	1/10W
R655	1-216-049-00	METAL CHIP	1K	5%	1/10W
R656	1-216-049-00	METAL CHIP	1K	5%	1/10W
R657	1-216-121-00	METAL CHIP	1M	5%	1/10W
R658	1-216-097-00	METAL CHIP	100K	5%	1/10W

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X501	1-577-364-11	VIBRATOR, CERAMIC (12MHz)	

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Ref. No.	Part No.	Description
*	1-642-446-11	BRIDGE BOARD ************
*	1-642-447-11	CONNECTOR (A) BOARD *******************
*	1-642-448-11	CONNECTOR (B) BOARD *******************
*	1-642-444-11	JACK BOARD **********
*	1-642-445-11	SPEAKER BOARD *************
*	1-642-449-11	TRANSFORMER (A) BOARD *********************
*	1-642-450-11	TRANSFORMER (B) BOARD *********************
*	1-642-451-11	TRANSFORMER (C) BOARD *********************

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C401	1-162-282-31	CERAMIC	100PF	10%	50V
C451	1-162-282-31	CERAMIC	100PF	10%	50V
C891	1-164-159-11	CERAMIC	0.1uF		50V(G, IT)
C892	1-164-159-11	CERAMIC	0.1uF		50V(G, IT)
C893	1-164-159-11	CERAMIC	0.1uF		50V(G, IT)
C894	1-164-159-11	CERAMIC	0.1uF		50V(G, IT)

< CONNECTOR >

Ref. No.	Part No.	Description
CN101	1-563-311-11	CONNECTOR, BOARD TO BOARD 10P
CN102	1-573-826-11	CONNECTOR, BOARD TO BOARD 12P
* CN311	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P
* CN312	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P
* CN401	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P
* CN402	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P
* CN403	1-573-844-11	CONNECTOR, BOARD TO BOARD 12P
CN404	1-568-438-11	SOCKET, CONNECTOR 17P
CN405	1-568-437-11	SOCKET, CONNECTOR 7P
* CN411	1-580-739-11	SOCKET, CONNECTOR 15P(SYSTEM CONTROL 1)
* CN412	1-580-740-11	SOCKET, CONNECTOR 17P(SYSTEM CONTROL 2)
CN701	1-563-311-11	CONNECTOR, BOARD TO BOARD 10P
* CN702	1-564-518-11	PLUG, CONNECTOR 3P
CN821	1-573-094-11	SOCKET, CONNECTOR 13P
CN822	1-573-094-11	SOCKET, CONNECTOR 13P
* CN911	1-580-939-11	SOCKET, CONNECTOR 4P
CN913	1-569-493-11	SOCKET, CONNECTOR 7P
* CN914	1-569-502-11	PIN, CONNECTOR 7P

BRIDGE **CONNECTOR (A)** **CONNECTOR (B)** **JACK** **SPEAKER**
TRANSFORMER (A) **TRANSFORMER (B)** **TRANSFORMER (C)**

Ref. No.	Part No.	Description	Remark
CN921	1-569-496-11	SOCKET, CONNECTOR 10P	
* CN922	1-569-502-11	PIN, CONNECTOR 7P	
		< JACK >	
J402	1-569-662-11	JACK, PIN 1P (SUPER WOOFER OUT)	
J801	1-573-110-11	JACK, PIN 2P (SURROUND SPEAKER)	(UK)
		< RESISTOR >	
R401	1-249-417-11	CARBON 1K 5% 1/4W	
R451	1-249-417-11	CARBON 1K 5% 1/4W	
R891	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R892	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R893	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
R894	1-247-727-11	CARBON 10 5% 1/2W	(G, IT)
		< TERMINAL >	
TB801	1-537-336-11	TERMINAL BOARD (SPEAKER)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remark
7	1-690-994-11	WIRE (FLAT TYPE) (17 CORE)	
25	1-690-993-11	WIRE (FLAT TYPE) (13 CORE)	
27	1-690-992-11	WIRE (FLAT TYPE) (7 CORE)	
31	1-590-240-11	WIRE (FLAT TYPE) (7 CORE)	
⚠F901	1-532-259-00	FUSE, TIME-LAG (T1.6A)	
M801	1-541-953-11	MOTOR, DC FAN	
⚠PT901	1-450-793-11	TRANSFORMER, POWER (AEP, G, IT)	
⚠PT901	1-450-794-11	TRANSFORMER, POWER (UK)	

****

HARDWARE LIST

Ref. No.	Part No.	Description	Remark
#1	7-682-547-04	SCREW +BVTT 3X6 (S)	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
#4	7-682-547-09	SCREW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-957-001-11

Sony Corporation
Audio Group

English
92D0460-1
Printed in Japan

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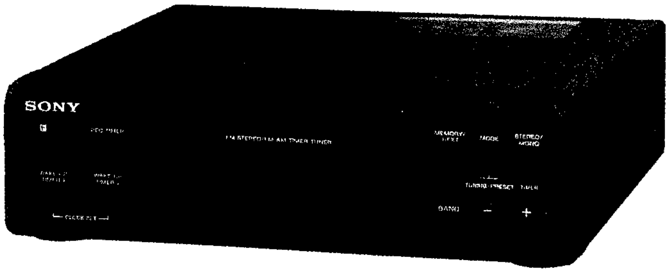
Published by Customer Relations and Service Group

ST-H3700

SERVICE MANUAL

AEP Model
UK Model



This set.is the tuner section in MHC-2700/3700

SPECIFICATIONS

System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	AEP, UK, Germany model: MW: 531—1,602kHz LW: 153—279kHz Italian model: MW: 522—1,611kHz LW: 144—288kHz
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

Design and specifications subject to change without notice.

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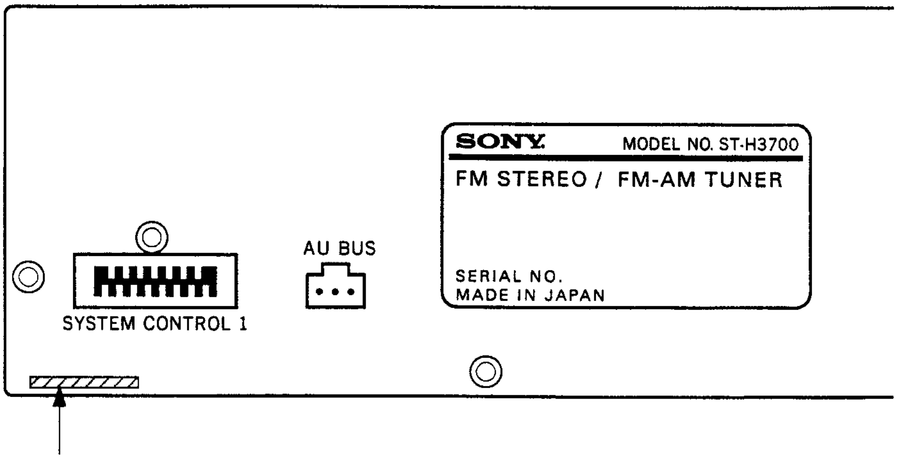
MICROFILM

FM STEREO/FM-AM TUNER

SONY®

MODEL IDENTIFICATION

—BACK PANEL—


SONY
MODEL NO. ST-H3700
FM STEREO / FM-AM TUNER
SERIAL NO.
MADE IN JAPAN
AU BUS
SYSTEM CONTROL 1

4-948-729-01 (AE) : AEP, UK model
4-948-729-11 (IT) : Italian (IT) model
4-948-729-21 (AE4): Germany (G) model

SECTION 1
SERVICING NOTES

1-1. SUPPLY OF POWER DURING SERVICES

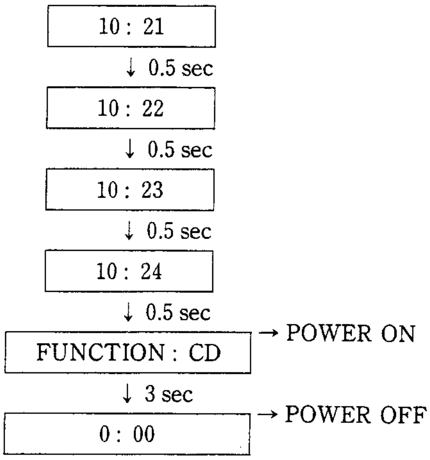
Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier TA-H2700/H3700 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to TA-H2700/H3700 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC −24V	Display controller IC701 grid voltage (VG)
DC 5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

1-2. SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier TA-H2700/H3700 and set the SYSTEM POWER switch to STANDBY state.
(2) Set the time of the tuner to any time.
(3) Press 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "−" beforehand, finally press "MEMORY/NEXT")
(4) FL display tube


10 : 21
↓ 0.5 sec
10 : 22
↓ 0.5 sec
10 : 23
↓ 0.5 sec
10 : 24
↓ 0.5 sec
FUNCTION : CD
→ POWER ON
↓ 3 sec
0 : 00
→ POWER OFF

(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the next page state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

· **Frequencies initially preset**

	AEP, UK, Germany model			Italian model		
	FM	MW	LW	FM	MW	LW
1	87.5MHz	531kHz	153kHz	87.5MHz	522kHz	144kHz
2	88.0MHz	603kHz	162kHz	88.0MHz	603kHz	162kHz
3	98.0MHz	999kHz	216kHz	98.0MHz	999kHz	216kHz
4	100.0MHz	1404kHz	270kHz	100.0MHz	1404kHz	270kHz
5	108.0MHz	1602kHz	279kHz	108.0MHz	1611kHz	288kHz
6—20	*1	*2	*2	*1	*2	*2

*1 The same frequency values are set for the preset memory No. 6—No. 10, No. 11—No. 15 and No. 16—No. 20 as for No. 1—No. 5 respectively.

*2 The same frequency values are set for the preset memory No. 6—No. 10 as for No. 1—No. 5.

1-3. SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

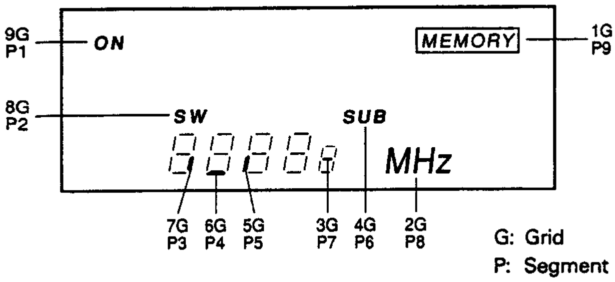
It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier TA-H2700/H3700 and remove the AC cord of the amplifier out of the AC receptacle.

(2) While pressing 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.

(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting: Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "−" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking: Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first, and every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated.
(Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

1-4. HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.
(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.

(2) Press 3 switches "STEREO/MONO", "−" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "−" beforehand, and finally press "MEMORY/NEXT".)

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

SECTION 2
GENERAL

This section is extracted from instruction manual.

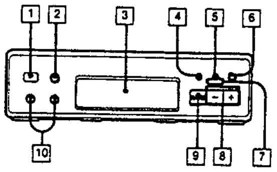
Parts Identification

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1. Remote control sensor
2. REC TIMER button (53)
3. Display window
4. MEMORY/NEXT button ⑫ ㉖ (57)
5. MODE button ㉖ ㉕
6. STEREO/MONO (stereo/monaural) button ㉗
7. TUNING/PRESET indicators ·
8. TUNING · PRESET/TIMER –/+ buttons
9. BAND selector ㉖
10. WAKE UP TIMER 1, 2 /CLOCK SET buttons ⑫ ㉕

A



Clock Setting

Setting the Clock

Example: Set to 9:25 in the morning.

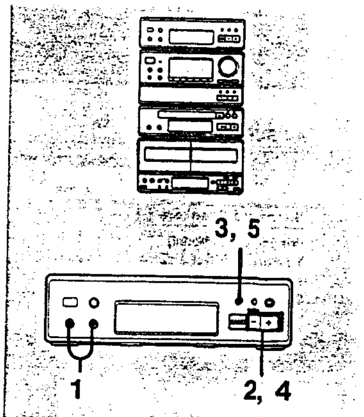
1 **Press WAKE UP TIMER 1 and 2 at the same time.**

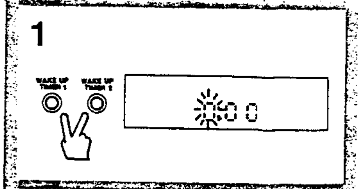
2 **Set the hour with the – or + button.**

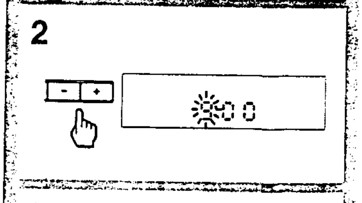
3 **Press MEMORY/NEXT.**

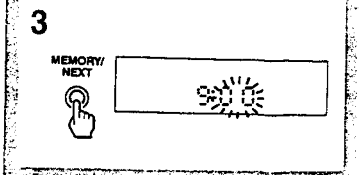
4 **Set the minute with the – or + button.**

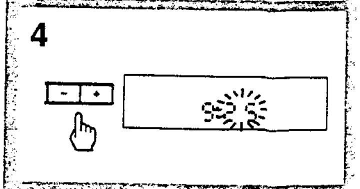
5 **Press MEMORY/NEXT.**
The clock starts operating.

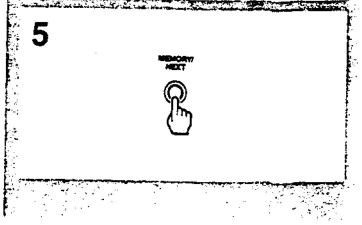












When a power interruption occurs
The clock, timer and Wake up Volume settings are all erased, and "0:00" will flash on the display.

To change the frequency display to the time display
Press CLOCK DISP. on the remote commander. Press it again to change to the frequency display.

Radio

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

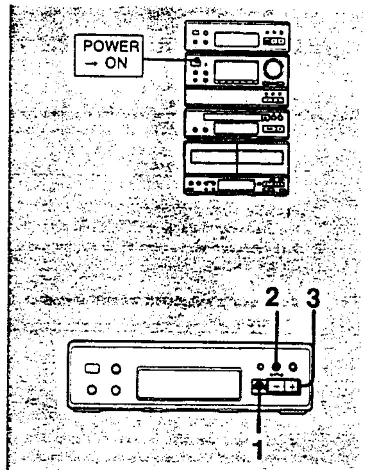
Tuning in Automatically

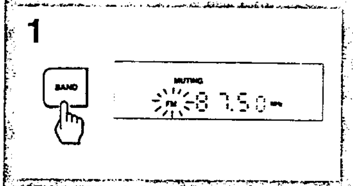
1 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows:
FM → MW → LW

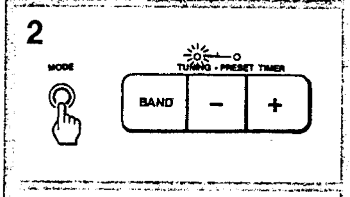
2 **Press MODE so that the TUNING indicator lights up.**

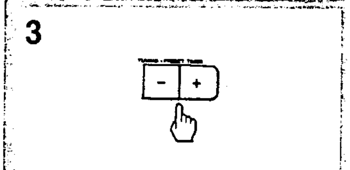
3 **Keep – or + depressed for more than 1 second.**
"AUTO" appears on the display and the unit tunes in a station automatically.

Repeat step 3 until the desired station appears.


POWER
→ ON
2
3
1


1
BAND
MUTING
FM 87.50 MHz


2
MODE
TUNING · PRESET TIMER
BAND
–
+


3
TUNING · PRESET TIMER
–
+

Radio

Tuning in Manually

1 **Press BAND repeatedly until the desired band appears.**

2 **Press MODE so that the TUNING indicator lights up.**

3 **Press – or + repeatedly until the desired station appears.**

Indicator on the display

TUNED: Appears when a station with sufficient signal strength is tuned in.

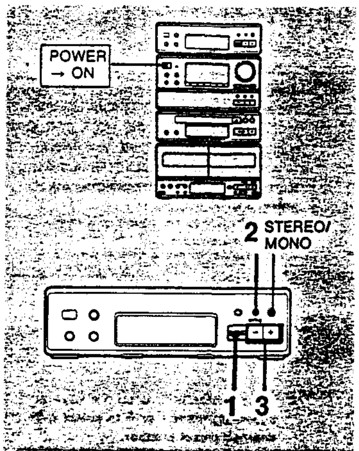
STEREO: Appears when an FM stereo program with sufficient signal strength is received.

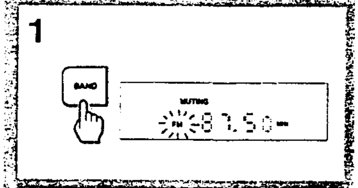
Antenna adjustment A

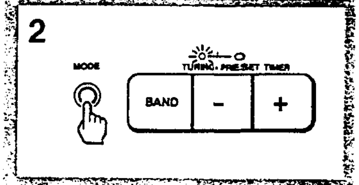
For MW and LW reception, find the best location for the supplied AM loop antenna.

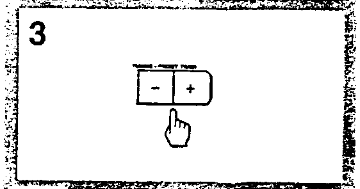
When an FM program is noisy or hard to receive

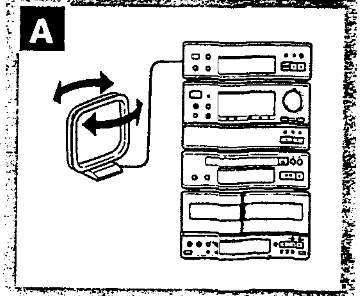
Press STEREO/MONO so that "MONO" appears in the display. There will be no stereo effect, but the reception will be improved. Press the button again to restore the stereo effect.


POWER
→ ON
2 STEREO/
MONO
1
3


1
BAND
MUTING
FM 87.50 MHz


2
MODE
TUNING · PRESET TIMER
BAND
–
+





Radio

Storing Stations

You can store up to 20 FM stations, 10 MW stations and 10 LW stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number.
This operation is not possible with the remote commander.

1 **Tune in the desired station.**

2 **Press MEMORY/NEXT.**
"MEMORY" and the preset station numbers appear on the display.

3 **While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.**

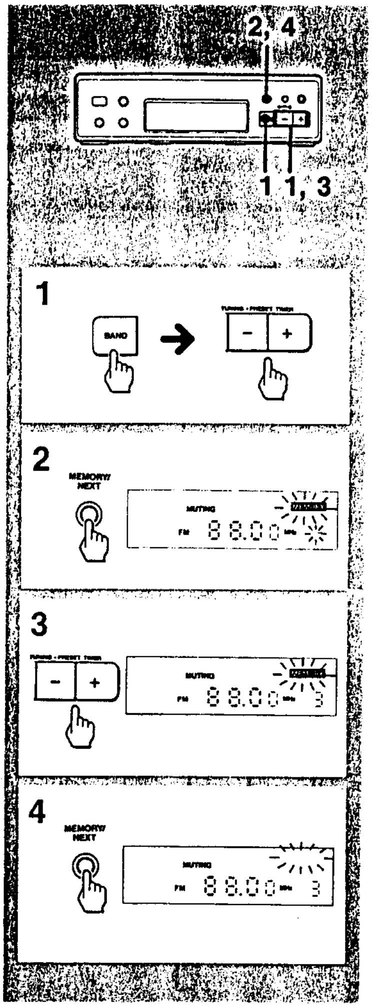
4 **Press MEMORY/NEXT.**
"MEMORY" disappears, and the station is stored.

Repeat step 1 to 4 for each station to be stored.

If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.



Radio

To Tune in a Preset Station

Notes:
- When you use the remote commander for the following operations make sure that the display of the remote commander shows "TUNER". If not, press TUNER on the remote commander.
- You cannot operate the buttons on the lid if the lid is open.

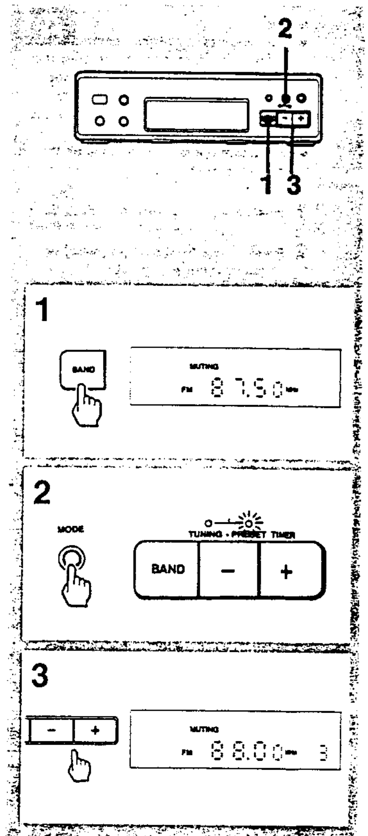
1 **Press BAND to select a desired band.**

2 **Press MODE so that the PRESET indicator lights up.**

3 **Press – or + to select the desired preset station number.**

To tune in a preset station directly

Possible only with the remote commander.
1 Press BAND to select a desired band.
2 Press the numeric buttons to select the desired preset station number.



SECTION 3
ELECTRICAL ADJUSTMENTS

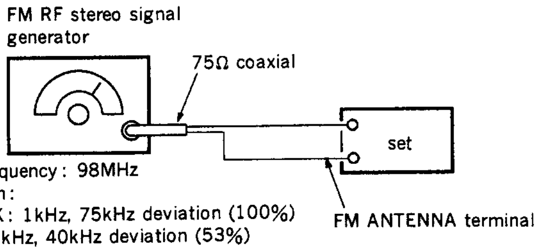
Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

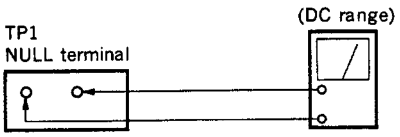
FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting:


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

Carrier frequency: 98MHz
Modulation:
AEP, UK: 1kHz, 75kHz deviation (100%)
G, IT: 1kHz, 40kHz deviation (53%)
Output level: 1mV (60dBμ)

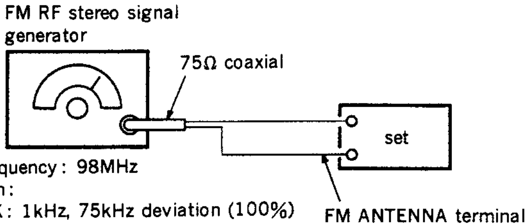

VOM
(DC range)
TP1
NULL terminal

Procedure:
1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note: FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuning Level Adjustment

Setting:


FM RF stereo signal generator
75Ω coaxial
set
FM ANTENNA terminal

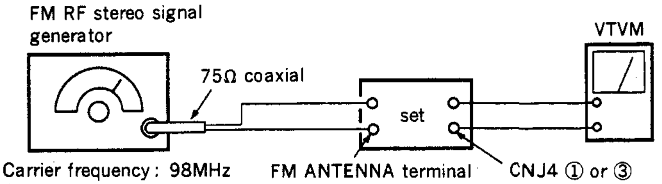
Carrier frequency: 98MHz
Modulation:
AEP, UK: 1kHz, 75kHz deviation (100%)
G, IT: 1kHz, 40kHz deviation (53%)
Output level: 0.018mV (25dBμ)

Procedure:
1. Tune the set to 98MHz.
2. Adjust T24 so that the TUNED indicator goes on.

- G : Germany model
- IT: Italian model

FM Stereo Separation Adjustment

Setting:


FM RF stereo signal generator
VTVM
75Ω coaxial
set
FM ANTENNA terminal
CNJ4 ① or ③

Carrier frequency: 98MHz
Output level: 1mV (60dBμ)
Modulation: L+R 33.75kHz deviation
L−R 33.75kHz deviation
Pilot Signal 19kHz 7.5kHz deviation

Procedure:
Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

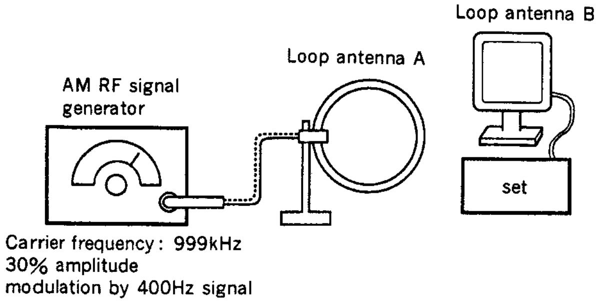
L-CH Stereo separation: Ⓐ—Ⓑ
R-CH Stereo separation: Ⓒ—Ⓓ

The separations of both channels should be equal.

AM SECTION

AM Tuning Level Adjustment

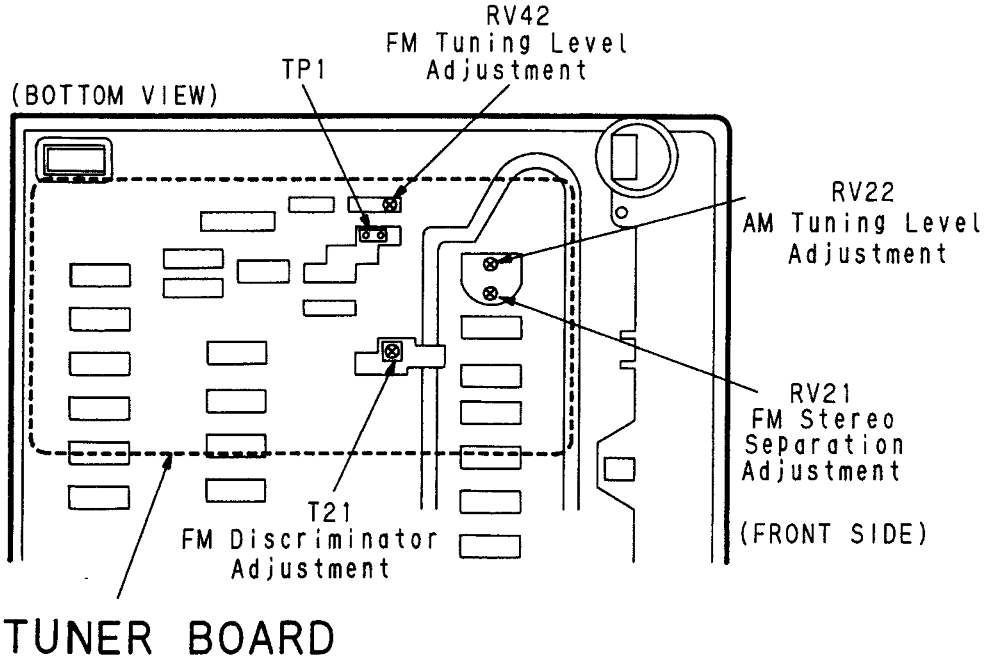
Setting :


Loop antenna B
Loop antenna A
AM RF signal generator
set
Carrier frequency : 999kHz
30% amplitude
modulation by 400Hz signal

Procedure :

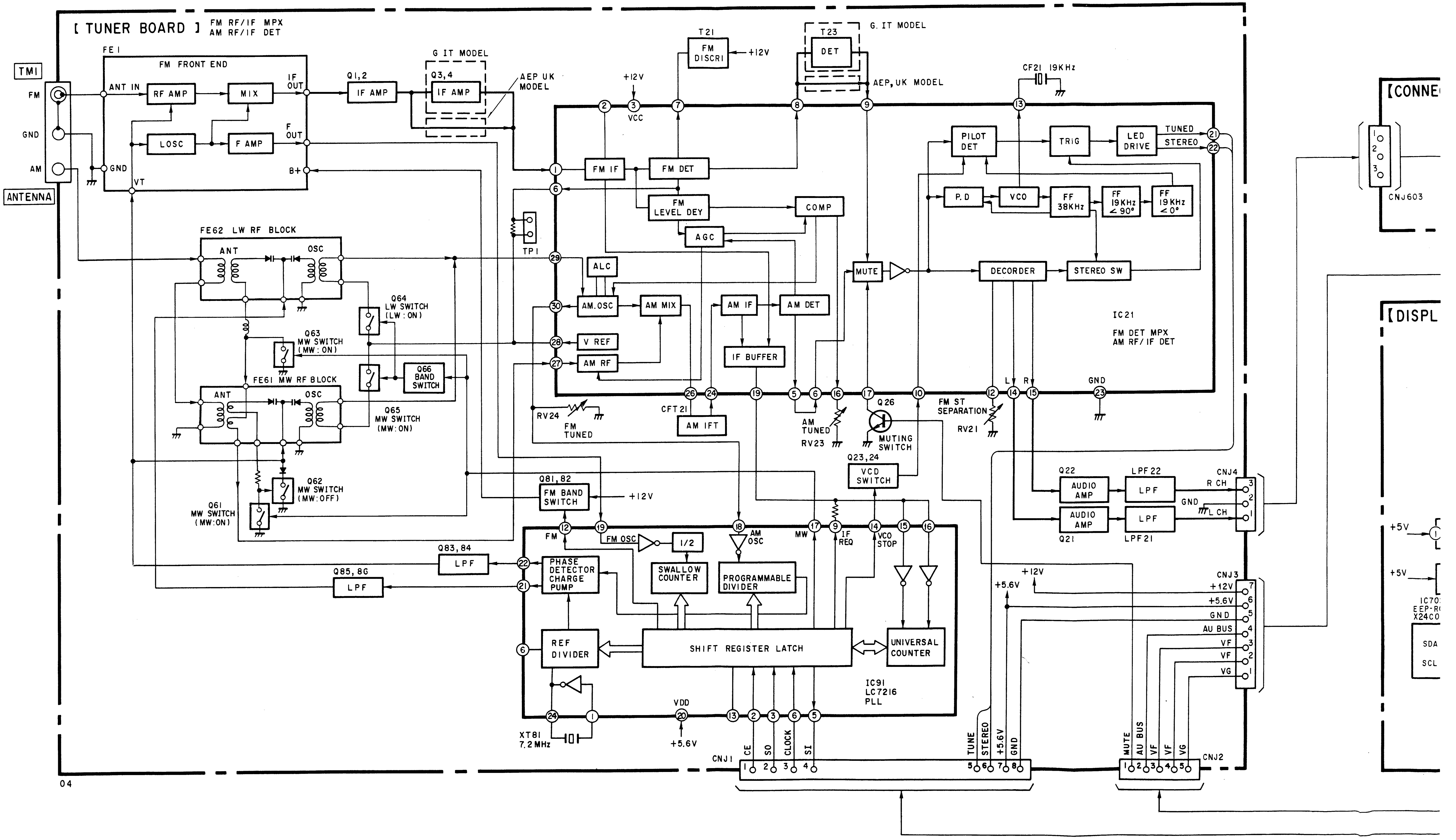
1. Set loop antenna A so that the loop antenna B input level becomes 58dBμ/m (0.8mV/m)
2. Tune the set to 999kHz.
3. Adjust the RV22 so that the TUNED indicator goes on.

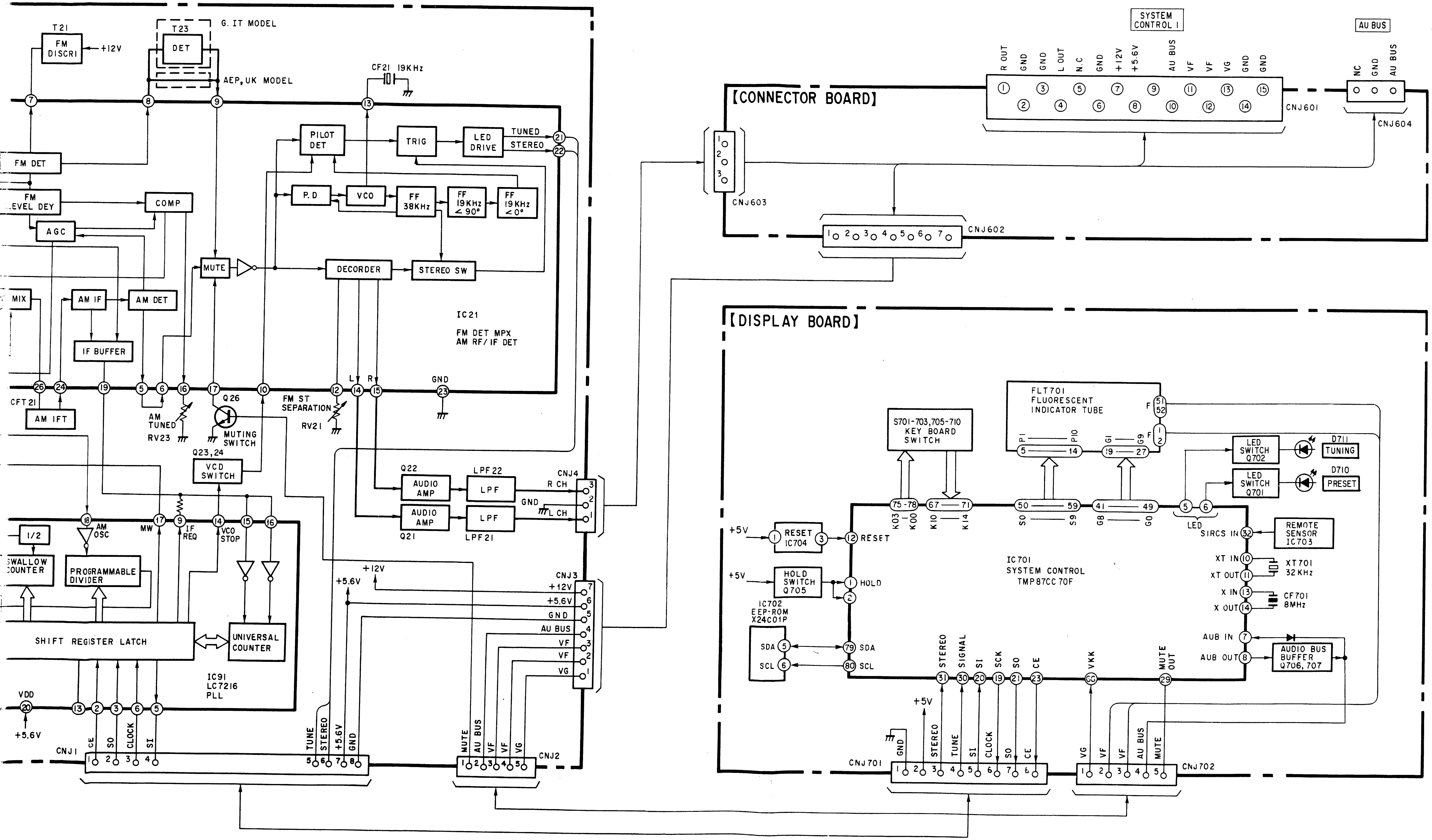
Adjustment Location :


RV42
FM Tuning Level
Adjustment
TP1
(BOTTOM VIEW)
RV22
AM Tuning Level
Adjustment
RV21
FM Stereo
Separation
Adjustment
(FRONT SIDE)
T21
FM Discriminator
Adjustment
TUNER BOARD

SECTION 4
DIAGRAMS

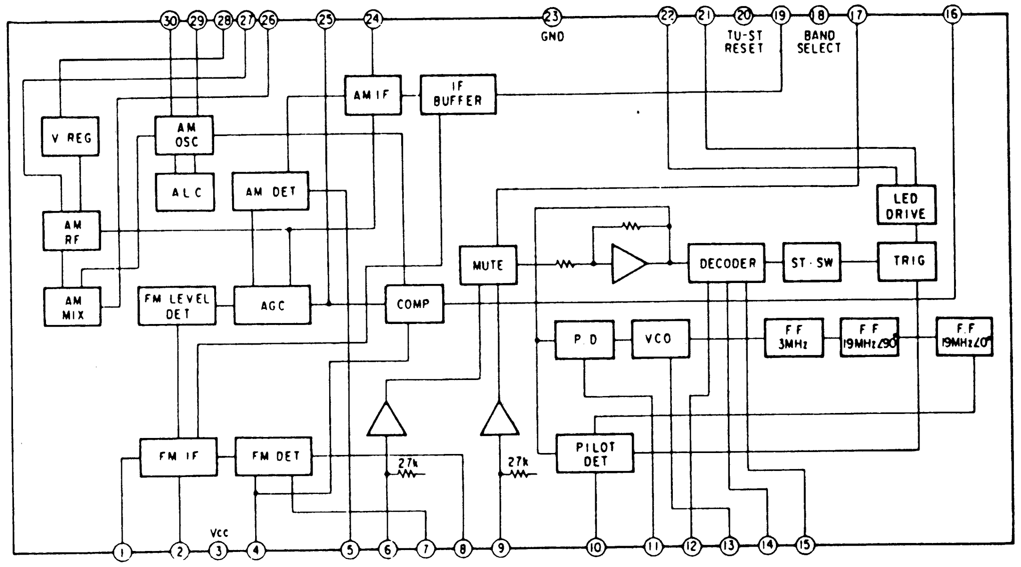
4-1. BLOCK DIAGRAM


[TUNER BOARD]
FM RF/IF MPX
AM RF/IF DET
TM1
FM
GND
AM
ANTENNA
FE1
FM FRONT END
ANT IN
RF AMP
MIX
IF OUT
LOSC
F AMP
F OUT
GND
VT
B+
Q1,2
IF AMP
G IT MODEL
Q3,4
IF AMP
AEP UK MODEL
T21
FM DISCRI
+12V
T23
DET
G. IT MODEL
AEP, UK MODEL
+12V
VCC
CF21 19KHz
FM IF
FM DET
FM LEVEL DEY
COMP
AGC
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P. D
VCO
FF 38KHz
FF 19KHz ∠90°
FF 19KHz ∠0°
TP1
FE62 LW RF BLOCK
ANT
OSC
ALC
AM.OSC
AM MIX
AM IF
AM DET
MUTE
DECORDER
STEREO SW
Q64 LW SWITCH (LW: ON)
Q63 MW SWITCH (MW: ON)
V REF
AM RF
IF BUFFER
IC21
FM DET MPX
AM RF/IF DET
Q66 BAND SWITCH
FE61 MW RF BLOCK
ANT
OSC
Q65 MW SWITCH (MW: ON)
RV24
FM TUNED
CFT21
AM IFT
AM TUNED
RV23
Q26
MUTING SWITCH
FM ST SEPARATION
RV21
L
R
GND
Q23,24
VCD SWITCH
Q62 MW SWITCH (MW: OFF)
Q61 MW SWITCH (MW: ON)
Q81,82
FM BAND SWITCH
+12V
FM
FM OSC
1/2
AM OSC
MW
IF REQ
VCO STOP
Q22
AUDIO AMP
LPF22
LPF
CNJ4
R CH
GND
L CH
AUDIO AMP
LPF
Q21
LPF21
Q83,84
LPF
Q85,86
LPF
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER
PROGRAMMABLE DIVIDER
+12V
+5.6V
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
REF DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7216
PLL
XT81
7.2MHz
VDD
+5.6V
CNJ1
CE
SO
CLOCK
SI
TUNE
STEREO
+5.6V
GND
MUTE
AU BUS
VF
VF
VG
CNJ2
04
[CONNE
CNJ603
[DISPL
+5V
+5V
IC70
EEP-R
X24C0
SDA
SCL

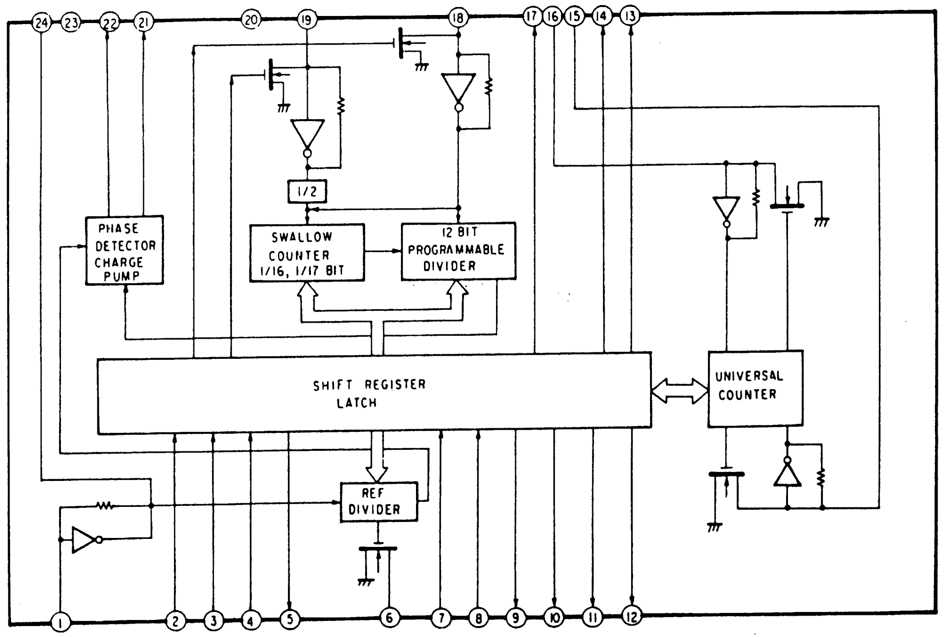

T21
FM DISCRI
+12V
T23
DET
G. IT MODEL
AEP, UK MODEL
CF21 19KHz
FM DET
FM LEVEL DEY
COMP
AGC
PILOT DET
TRIG
LED DRIVE
TUNED
STEREO
P.D
VCO
FF 38KHz
FF 19KHz ∠90°
FF 19KHz ∠0°
MUTE
DECORDER
STEREO SW
MIX
AM IF
AM DET
IF BUFFER
IC21
FM DET MPX
AM RF/IF DET
L
R
GND
CFT21
AM IFT
AM TUNED
RV23
Q26
MUTING SWITCH
FM ST SEPARATION
RV21
Q23,24
VCO SWITCH
Q22
AUDIO AMP
LPF22
LPF
CNJ4
R CH
GND
L CH
AUDIO AMP
Q21
LPF
LPF21
AM OSC
MW
IF REQ
VCO STOP
1/2
SWALLOW COUNTER
PROGRAMMABLE DIVIDER
+12V
+5.6V
CNJ3
+12V
+5.6V
GND
AU BUS
VF
VF
VG
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC91
LC7216
PLL
VDD
+5.6V
CNJ1
CE
SO
CLOCK
SI
TUNE
STEREO
+5.6V
GND
MUTE
AU BUS
VF
VF
VG
CNJ2
SYSTEM CONTROL I
AU BUS
R OUT
GND
GND
L OUT
N.C
GND
+12V
+5.6V
AU BUS
VF
VF
VG
GND
GND
NC
GND
AU BUS
[CONNECTOR BOARD]
CNJ601
CNJ604
CNJ603
CNJ602
[DISPLAY BOARD]
FLT701
FLUORESCENT INDICATOR TUBE
F
P1
P10
G1
G9
S701-703,705-710
KEY BOARD SWITCH
LED SWITCH Q702
D711
TUNING
LED SWITCH Q701
D710
PRESET
K03
K00
K10
K14
S0
S9
G8
G0
LED
SIRCS IN
REMOTE SENSOR IC703
+5V
RESET IC704
RESET
IC701
SYSTEM CONTROL
TMP87CC70F
XT IN
XT OUT
XT701 32KHz
X IN
X OUT
CF701 8MHz
+5V
HOLD SWITCH Q705
HOLD
IC702
EEP-ROM
X24C01P
SDA
SCL
AUB IN
AUB OUT
AUDIO BUS BUFFER Q706, 707
STEREO
SIGNAL
SI
SCK
SO
CE
VKK
MUTE OUT
+5V
GND
STEREO
TUNE
SI
CLOCK
SO
CE
CNJ701
VG
VF
VF
AU BUS
MUTE
CNJ702

• IC Block Diagrams

IC21 LA1851N


V REG
AM OSC
AM RF
ALC
AM DET
AM MIX
FM LEVEL DET
AGC
COMP
AM IF
IF BUFFER
MUTE
DECODER
ST SW
LED DRIVE
TRIG
P D
VCO
F F 3MHz
F F 19MHz∠90
F F 19MHz∠0
PILOT DET
FM IF
FM DET
GND
TU-ST RESET
BAND SELECT
VCC
27k
27k

IC81 LC7218


PHASE DETECTOR CHARGE PUMP
1/2
SWALLOW COUNTER 1/16, 1/17 BIT
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
REF DIVIDER

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

> **Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

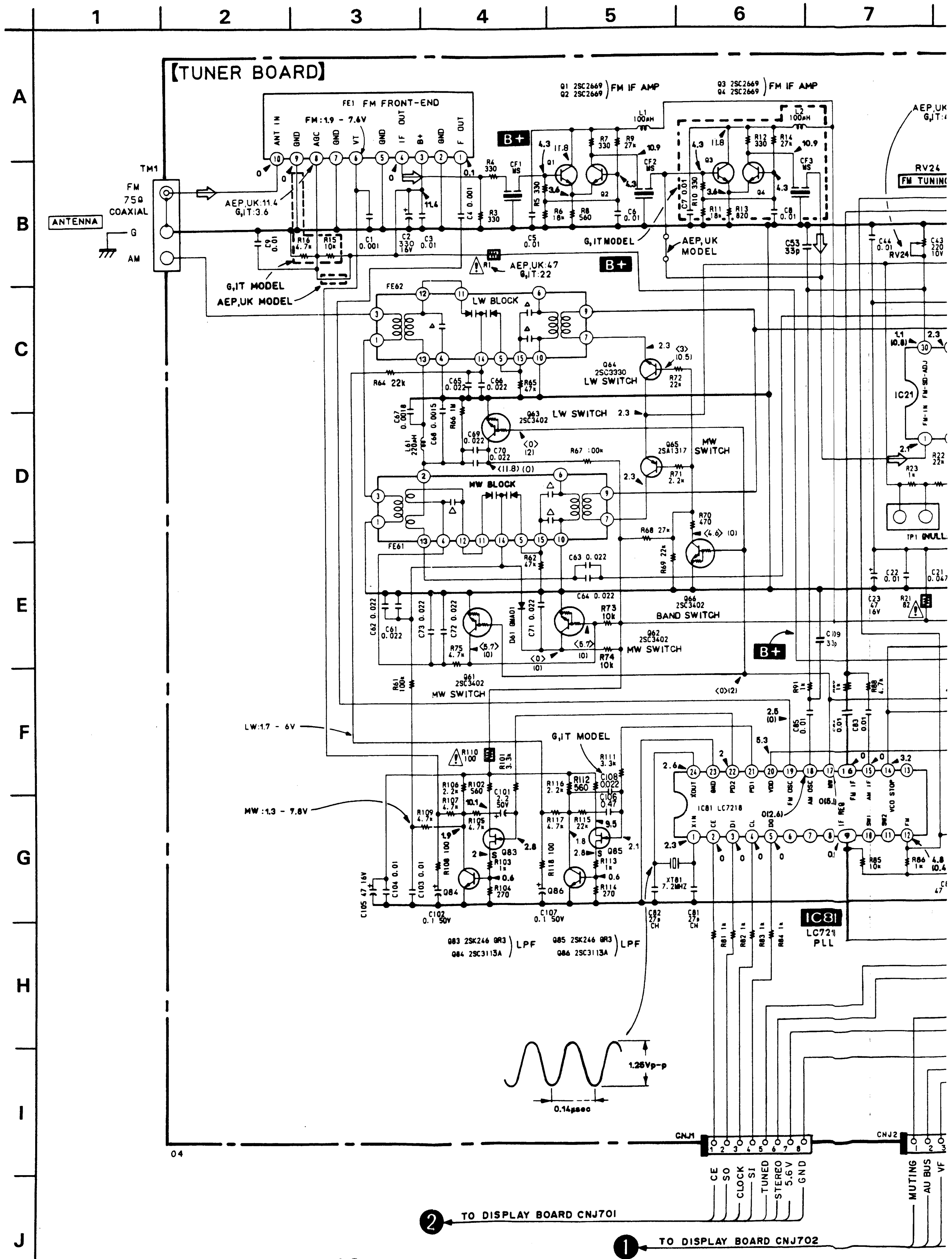
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

  no mark: FM
  ( ): MW
  < >: LW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.

  ⇨ : FM

• G : Germany model
• IT : Italian model

4-2. SCHEMATIC DIAGRAM —TUNER SECTION—


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
[TUNER BOARD]
FE1 FM FRONT-END
FM:1.9 - 7.6V
ANT IN
GND
AGC
VT
IF OUT
B+
F OUT
TM1
FM 75Ω COAXIAL
ANTENNA
G
AM
AEP,UK:11.4 G,IT:3.6
G,IT MODEL
AEP,UK MODEL
AEP,UK:4.7 G,IT:22
Q1 2SC2669
Q2 2SC2669
FM IF AMP
Q3 2SC2669
Q4 2SC2669
FM IF AMP
G,IT MODEL
AEP,UK MODEL
B+
AEP,UK G,IT
RV24 FM TUNING
FE62
LW BLOCK
Q64 2SC3330 LW SWITCH
Q63 2SC3402 LW SWITCH
Q65 2SA1317 MW SWITCH
MW BLOCK
FE61
Q66 2SC3402 BAND SWITCH
Q62 2SC3402 MW SWITCH
Q61 2SC3402 MW SWITCH
B+
IC21
TP1 (NULL)
LW:1.7 - 6V
MW:1.3 - 7.8V
G,IT MODEL
IC81 LC7218
XT81 7.2MHz
IC81 LC7218 PLL
Q83 2SK246 GR3
Q84 2SC3113A
LPF
Q85 2SK246 GR3
Q86 2SC3113A
LPF
1.25Vp-p
0.14µsec
CNJ1
CNJ2
CE
SO
CLOCK
SI
TUNED
STEREO
5.6V
GND
MUTING
AU BUS
VF
TO DISPLAY BOARD CNJ701
TO DISPLAY BOARD CNJ702
04

erwise noted. pF: μμF
except for electrolytics

r less unless otherwise

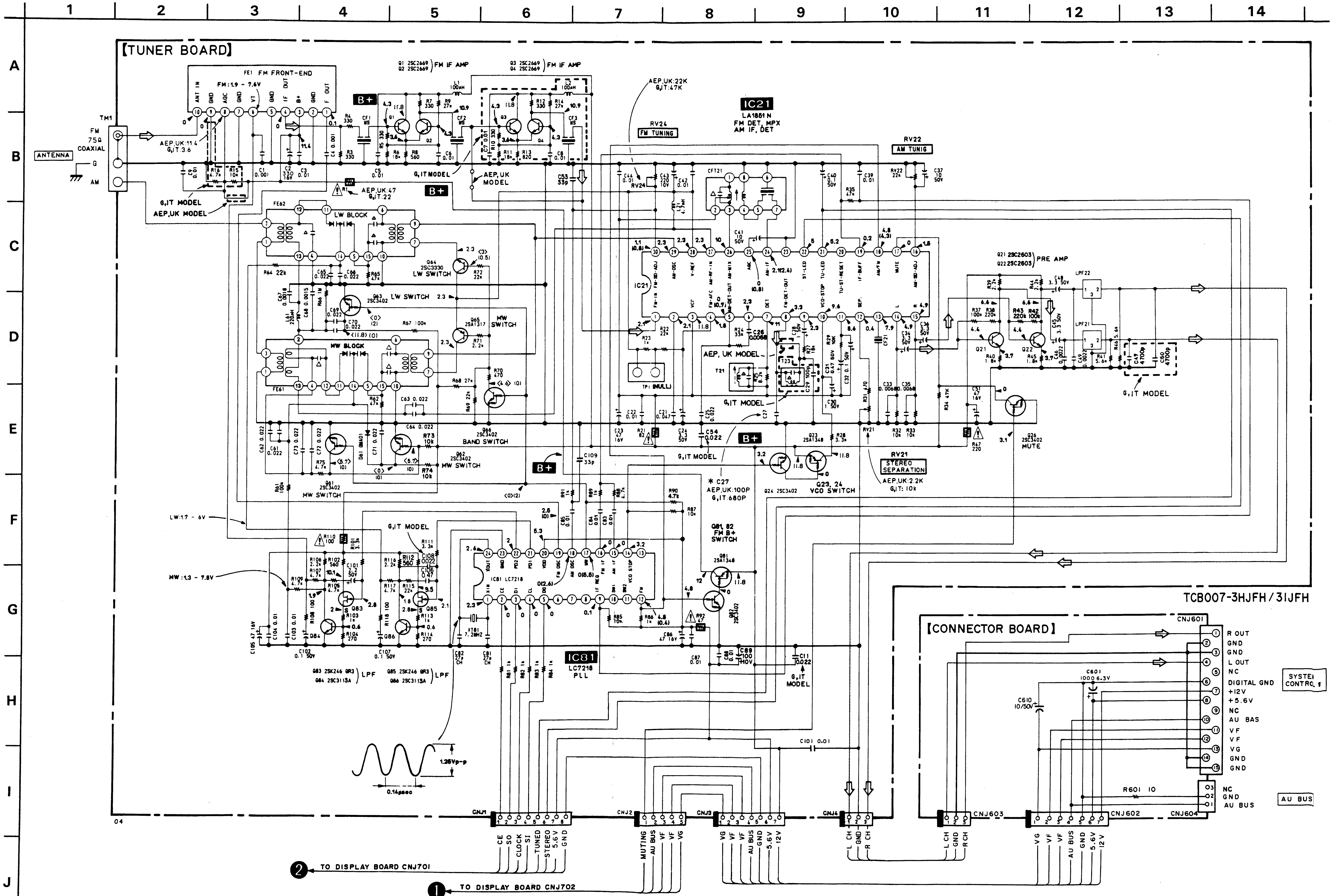
y mark ⚠ or dotted
for safety.
r specified.

ith respect to ground
ns.

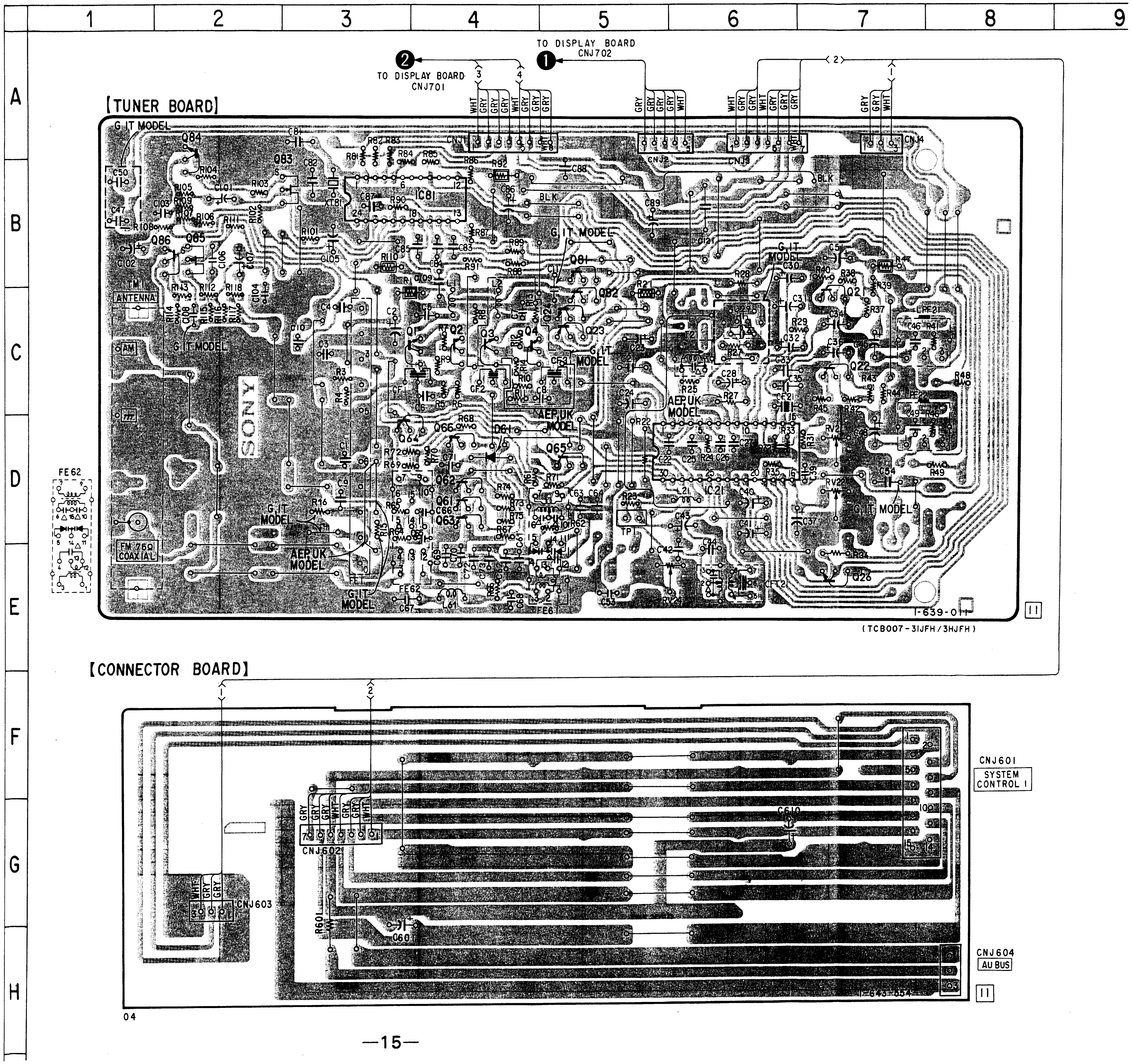
put Impedance 10MΩ).
due to normal produc-

scope.
due to normal produc-

4-2. SCHEMATIC DIAGRAM —TUNER SECTION—


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
【TUNER BOARD】
FE1 FM FRONT-END
FM:1.9 - 7.6V
ANT IN
GND
AGC
VT
IF OUT
B+
F OUT
TM1
FM 75Ω COAXIAL
ANTENNA
G
AM
AEP,UK:11.4
G,IT:3.6
G,IT MODEL
AEP,UK MODEL
Q1 2SC2669
Q2 2SC2669
FM IF AMP
Q3 2SC2669
Q4 2SC2669
FM IF AMP
B+
CF1
CF2
CF3
L1 100μH
AEP,UK:47
G,IT:22
AEP,UK MODEL
G,IT MODEL
FE62
LW BLOCK
Q64 2SC3330
LW SWITCH
Q63 2SC3402
LW SWITCH
Q65 2SA1317
MW SWITCH
FE61
MW BLOCK
Q66 2SC3402
BAND SWITCH
Q62 2SC3402
MW SWITCH
Q61 2SC3402
MW SWITCH
AEP,UK:22K
G,IT:47K
RV24
FM TUNING
IC21
LA1851N
FM DET, MPX
AM IF, DET
RV22
AM TUNIG
CFT21
T21
TP1 (NULL)
AEP, UK MODEL
G,IT MODEL
Q21 2SC2603
Q22 2SC2603
PRE AMP
LPF22
LPF21
G,IT MODEL
Q26 2SC3402
MUTE
RV21
STEREO SEPARATION
AEP,UK:2.2K
G,IT: 10k
Q23 2SA1348
Q24 2SC3402
Q23, 24
VCO SWITCH
* C27
AEP,UK:100P
G,IT:680P
Q81, 82
FM B+
SWITCH
Q81 2SA1348
Q82
LW:1.7 - 6V
MW:1.3 - 7.8V
G,IT MODEL
IC81 LC7218
IC81
LC7218
PLL
X81 7.2MHZ
G,IT MODEL
Q83 2SK246 GR3
Q84 2SC3113A
LPF
Q85 2SK246 GR3
Q86 2SC3113A
LPF
1.25Vp-p
0.14μsec
C101 0.01
TCB007-3HJFH/31JFH
【CONNECTOR BOARD】
CNJ601
R OUT
GND
GND
L OUT
NC
DIGITAL GND
+12V
+5.6V
NC
AU BAS
VF
VF
VG
GND
GND
SYSTEM CONTROL
C601 1000 6.3V
C610 10/50V
R601 10
NC
GND
AU BUS
AU BUS
CNJ1
CNJ2
CNJ3
CNJ4
CNJ603
CNJ602
CNJ604
CE
SO
CLOCK
SI
TUNED
STEREO
5.6V
GND
MUTING
AU BUS
VF
VF
VG
VG
VF
VF
AU BUS
GND
5.6V
12V
L CH
GND
R CH
L CH
GND
RCH
VG
VF
VF
AU BUS
GND
5.6V
12V
② TO DISPLAY BOARD CNJ701
① TO DISPLAY BOARD CNJ702
04

4-3. PRINTED WIRING BOARDS —TUNER SECTION— • Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
TO DISPLAY BOARD CNJ701
TO DISPLAY BOARD CNJ702
[TUNER BOARD]
G.IT MODEL
AEP.UK MODEL
FM ANTENNA
AM
FM 75Ω COAXIAL
SONY
FE62
1-639-011
(TCB007-31JFH/3HJFH)
[CONNECTOR BOARD]
CNJ601
SYSTEM CONTROL I
CNJ602
CNJ603
CNJ604
AU BUS
1-643-554
04

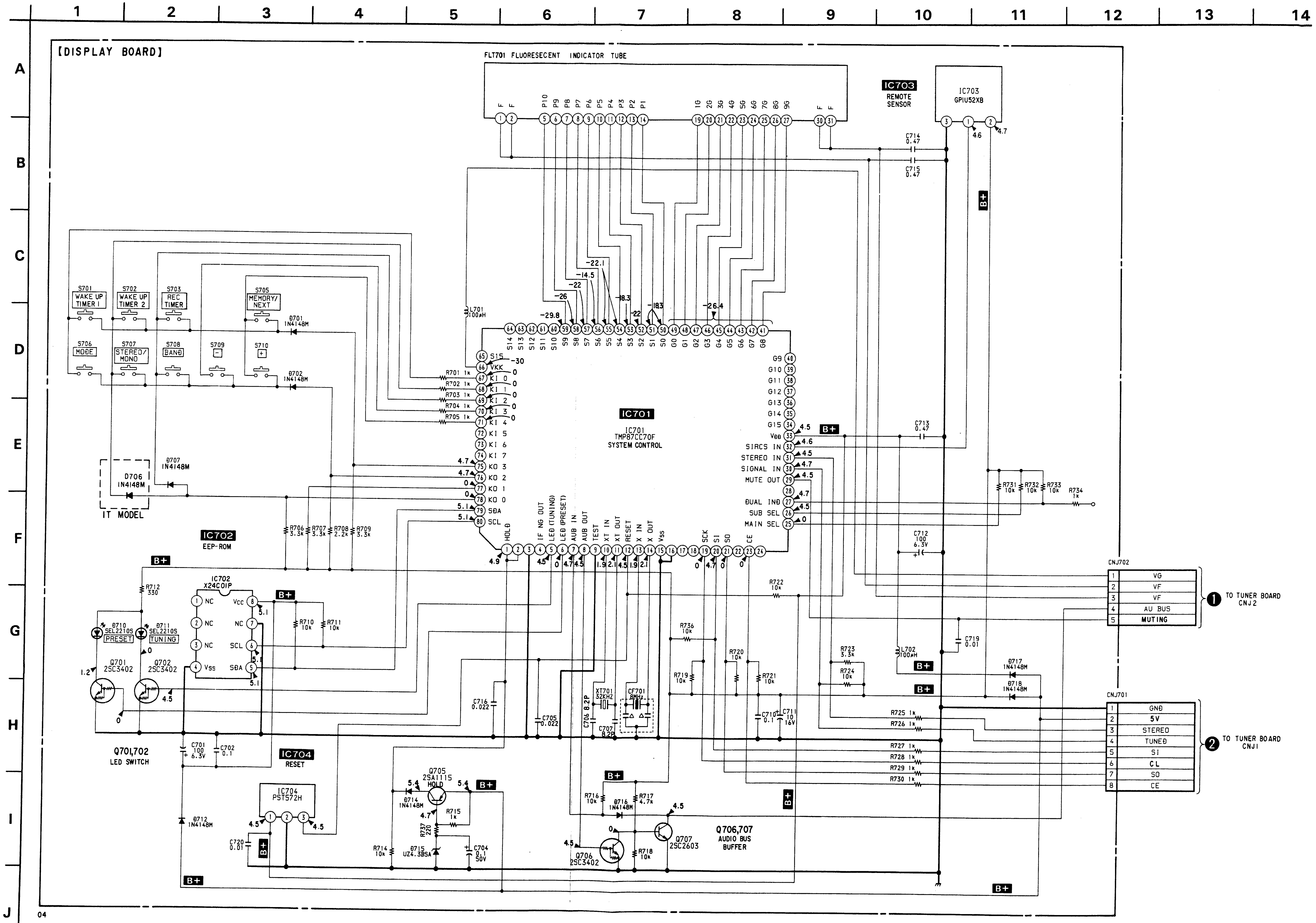
• Semiconductor Location

Ref. No.	Location
D61	D-4
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-4
Q3	C-4
Q4	C-4
Q21	C-7
Q22	C-7
Q23	C-5
Q24	C-5
Q26	E-7
Q61	D-4
Q62	D-4
Q63	D-4
Q64	D-3
Q65	D-5
Q66	D-4
Q81	B-5
Q82	C-5
Q83	B-3
Q84	A-2
Q85	B-2
Q86	B-2

Note:

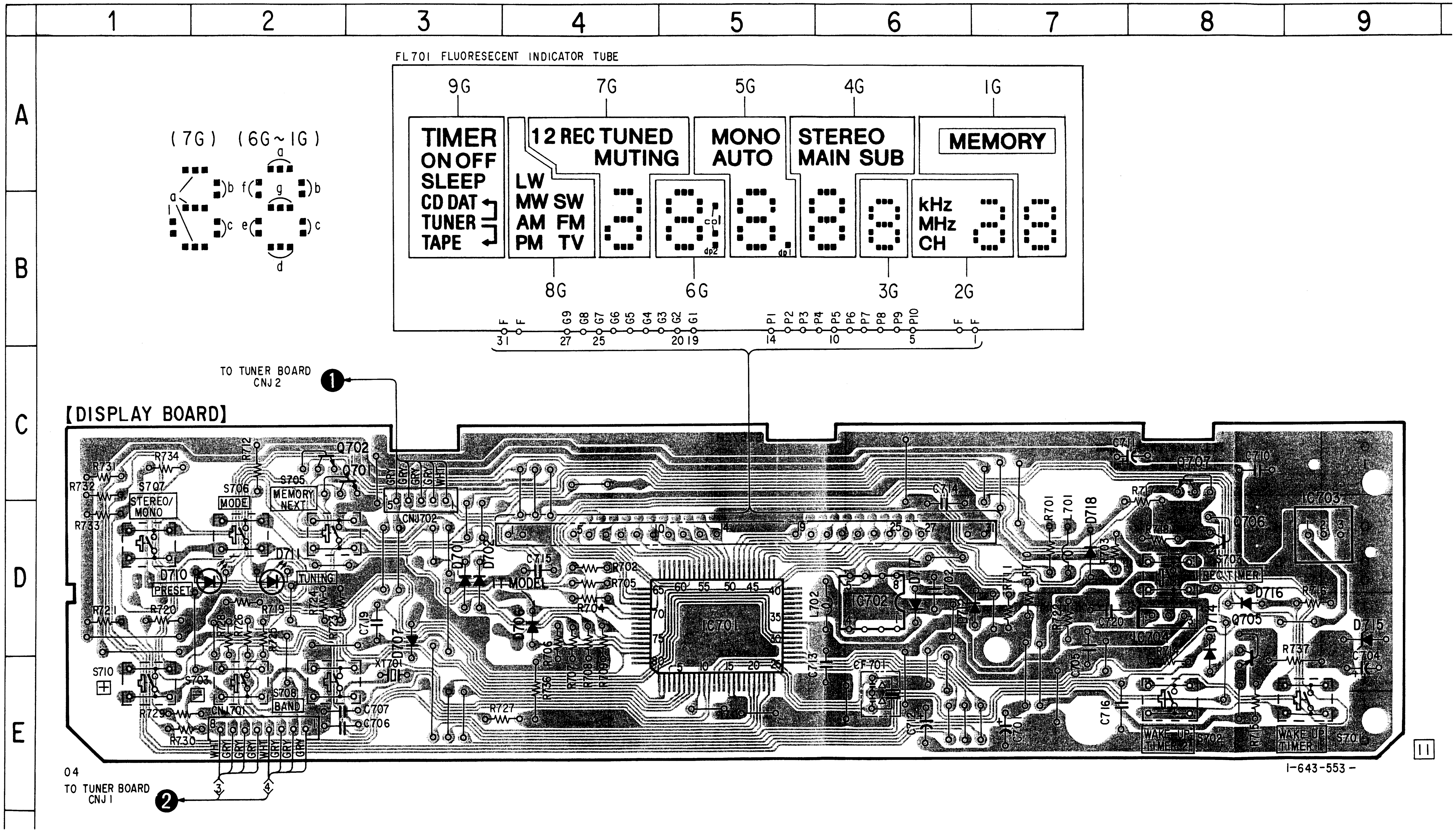
- ○—— : parts extracted from the component side.
- G : Germany model
- IT : Italian model

4-4. SCHEMATIC DIAGRAM —DISPLAY SECTION—


[DISPLAY BOARD]
FLT701 FLUORESECENT INDICATOR TUBE
IC703 REMOTE SENSOR
IC703 GP1U52XB
IC701 TMP87CC70F SYSTEM CONTROL
IC702 EEP-ROM
IC702 X24C01P
IC704 RESET
IC704 PST572H
S701 WAKE UP TIMER 1
S702 WAKE UP TIMER 2
S703 REC TIMER
S705 MEMORY/NEXT
S706 MODE
S707 STEREO/MONO
S708 BAND
S709 −
S710 +
D701 1N4148M
D702 1N4148M
D706 1N4148M
D707 1N4148M
IT MODEL
D710 SEL2210S PRESET
D711 SEL2210S TUNING
Q701 2SC3402
Q702 2SC3402
Q701,702 LED SWITCH
Q705 2SA1115 HOLD
D714 1N4148M
D715 UZ4.3BSA
D712 1N4148M
D716 1N4148M
D717 1N4148M
D718 1N4148M
Q706 2SC3402
Q707 2SC2603
Q706,707 AUDIO BUS BUFFER
XT701 32KHZ
CF701 8MHz
L701 100μH
L702 100μH
CNJ702
VG
VF
VF
AU BUS
MUTING
TO TUNER BOARD CNJ2
CNJ701
GND
5V
STEREO
TUNED
SI
CL
SO
CE
TO TUNER BOARD CNJ1
B+
HOLD
IF NG OUT
LED (TUNING)
LED (PRESET)
AUB IN
AUB OUT
TEST
XT IN
XT OUT
RESET
X IN
X OUT
Vss
SCK
SI
SO
CE
SIRCS IN
STEREO IN
SIGNAL IN
MUTE OUT
DUAL IND
SUB SEL
MAIN SEL
VDD
SDA
SCL
VKK
04

4-5. PRINTED WIRING BOARD —DISPLAY SECTION—

- Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
A
B
C
D
E
FL701 FLUORESECENT INDICATOR TUBE
9G
7G
5G
4G
1G
8G
6G
3G
2G
(7G) (6G~1G)
TIMER ON OFF SLEEP CD DAT TUNER TAPE
LW MW SW AM FM PM TV
12 REC TUNED MUTING
MONO AUTO
STEREO MAIN SUB
MEMORY
kHz MHz CH
F F G9 G8 G7 G6 G5 G4 G3 G2 G1
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 F F
31 27 25 20 19 14 10 5 1
TO TUNER BOARD CNJ2
❶
[DISPLAY BOARD]
S707 STEREO/MONO
S706 MODE
S705 MEMORY NEXT
S704 TUNING
D710 PRESET
D711
S710
S703
S708 BAND
CNJ701
CNJ702
IC701
IC702
IC703
IC704
Q701
Q702
Q705
Q706
Q707
XT701
CF701
REC TIMER
WAKE UP TIMER
S702
IT MODEL
04
TO TUNER BOARD CNJ1
❷
1-643-553-
11

• Semiconductor Location

Ref. No.	Location
D701	D-3
D702	D-3
D706	D-4
D707	D-3
D710	D-2
D711	D-2
D712	D-6
D714	D-8
D715	D-9
D716	D-8
D717	D-6
D718	D-7
IC701	D-5
IC702	D-6
IC703	D-9
IC704	D-8
Q701	C-2
Q702	C-2
Q705	D-8
Q706	D-8
Q707	C-8

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- IT: Italian model

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- IT: Italian model

4-6. PIN DESCRIPTION

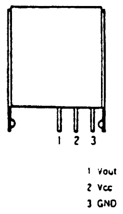
• IC701 System Controller (TMP87CC70F)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

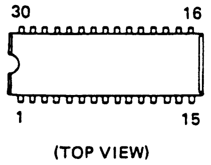
PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

4-7. SEMICONDUCTOR LEAD LAYOUTS

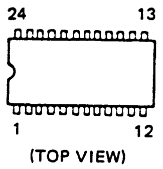
GP1U52XB


1
2
3
1 Vout
2 Vcc
3 GND

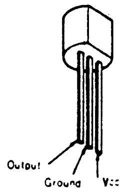
LA1851N


30
16
1
15
(TOP VIEW)

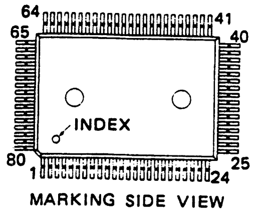
LC7218


24
13
1
12
(TOP VIEW)

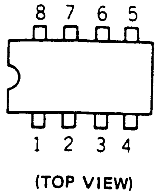
PST572H


Output
Ground
Vcc

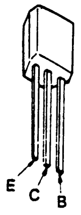
TMP87CC70F


64
41
65
40
INDEX
80
1
24
25
MARKING SIDE VIEW

X24C01P


8 7 6 5
1 2 3 4
(TOP VIEW)

DTA114ES
DTC114ES
2S2603-EF
2SC2669-0Y
2SC3113-AB



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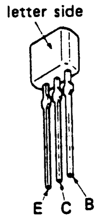
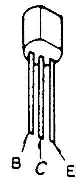

letter side
E
C
B

2SC3330-T



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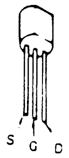
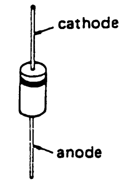
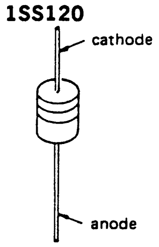


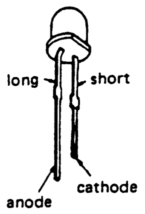
UZ-4.3BSA
1N4148M


cathode
anode

1SS120


cathode
anode

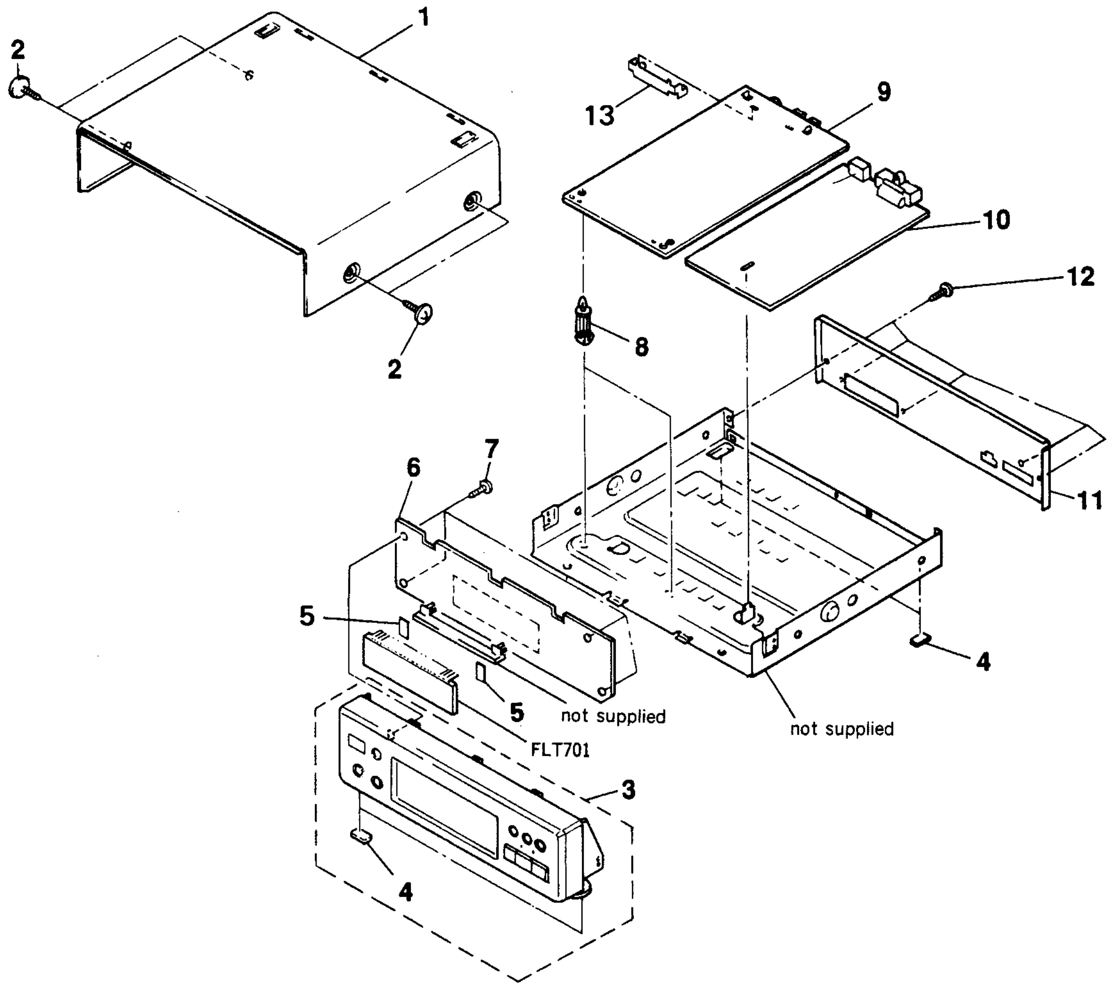
SEL2210S-D


long
short
anode
cathode

SECTION 5
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "＊" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.
- G : Germany model
- IT : Italian model



Ref. No.	Part No.	Description	Remark
＊1	4-944-423-41	CASE (K206522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	X-4942-571-1	PANEL ASSY, FRONT	
4	4-930-336-21	FOOT (FELT)	
＊5	4-932-810-11	CUSHION (FL)	
＊6	A-4345-967-A	DISPLAY BOARD, COMPLETE (AEP, UK, G)	
＊6	A-4345-970-A	DISPLAY BOARD, COMPLETE (IT)	
7	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
＊8	4-914-008-01	HOLDER, PCB	
＊9	A-4303-367-A	TUNER BOARD, COMPLETE (TCB007-HJFH) (AEP, UK)	
＊9	A-4303-368-A	TUNER BOARD, COMPLETE (TCB007-IJFH) (G, IT)	
＊10	1-643-554-11	CONNECTOR BOARD	
＊11	4-948-729-01	PANEL (EXP), BACK (AEP, UK)	
＊11	4-948-729-11	PANEL (EXP), BACK (IT)	
＊11	4-948-729-21	PANEL (EXP), BACK (G)	
12	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
＊13	4-924-988-11	PLATE (ST), GROUND	
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

- G : Germany model
- IT : Italian model

Ref. No.	Part No.	Description	Remark
	A-4303-367-A	TUNER BOARD, COMPLETE (TCB007-3HJFH)	(AEP, UK)
	A-4303-368-A	TUNER BOARD, COMPLETE (TCB007-3IJFH)	(G, IT)
		************************************	
*	4-924-988-11	PLATE (ST), GROUND	
		< CAPACITOR >	
C1	1-162-294-11	CERAMIC CHIP 0.001uF 20% 25V	
C2	1-124-119-00	ELECT 330uF 20% 16V	
C3	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C4	1-162-294-31	CERAMIC CHIP 0.001uF 20% 25V	
C5	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C6	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C7	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	(G, IT)
C8	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	(G, IT)
C9	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C11	1-101-005-00	CERAMIC 0.022uF 50V	(G, IT)
C21	1-101-006-00	CERAMIC 0.047uF 50V	
C22	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C23	1-124-477-11	ELECT 47uF 20% 25V	
C24	1-123-382-00	ELECT 3.3uF 20% 100V	
C25	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C26	1-163-019-00	CERAMIC CHIP 0.0068uF 20% 12V	
C27	1-162-516-11	CERAMIC CHIP 100pF 10% 50V	(AEP, UK)
C27	1-163-007-11	CERAMIC CHIP 680pF 20% 50V	(G, IT)
C28	1-124-903-11	ELECT 1.0uF 20% 50V	
C29	1-162-516-11	CERAMIC CHIP 100pF 10% 50V	(G, IT)
C30	1-124-903-11	ELECT 1.0uF 20% 50V	
C31	1-124-902-00	ELECT 0.47uF 20% 50V	
C32	1-124-463-00	ELECT 0.1uF 20% 50V	
C33	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C34	1-123-382-00	ELECT 3.3uF 20% 100V	
C35	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C36	1-123-382-00	ELECT 3.3uF 20% 100V	
C37	1-124-907-11	ELECT 10uF 20% 50V	
C39	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C40	1-124-463-00	ELECT 0.1uF 20% 50V	
C41	1-124-907-11	ELECT 10uF 20% 50V	
C42	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C43	1-126-176-11	ELECT 220uF 20% 10V	
C44	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C45	1-123-382-00	ELECT 3.3uF 20% 100V	
C46	1-161-375-00	CERAMIC CHIP 0.0022uF 20% 25V	
C47	1-163-170-00	CERAMIC CHIP 0.0047uF 20% 25V	(G, IT)
C48	1-123-382-00	ELECT 3.3uF 20% 100V	
C49	1-161-375-00	CERAMIC CHIP 0.0022uF 20% 25V	
C50	1-163-170-00	CERAMIC CHIP 0.0047uF 20% 25V	(G, IT)
C51	1-124-477-11	ELECT 47uF 20% 25V	
C53	1-163-105-00	CERAMIC CHIP 33pF 5% 50V	
C54	1-101-005-00	CERAMIC 0.022uF 50V	(G, IT)
C61	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C62	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C63	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C64	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C65	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C66	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C67	1-102-120-00	CERAMIC 0.0018uF 10% 50V	
C68	1-163-111-11	CERAMIC CHIP 0.0015uF 20% 25V	
C69	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C70	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C71	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C72	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C73	1-163-063-00	CERAMIC MELF 0.022uF 25V	
C81	1-102-961-00	CERAMIC 27pF 5% 50V	
C82	1-102-961-00	CERAMIC 27pF 5% 50V	
C83	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C84	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C85	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C88	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C89	1-124-443-00	ELECT 100uF 20% 10V	
C101	1-124-925-11	ELECT 2.2uF 20% 100V	
C102	1-124-463-00	ELECT 0.1uF 20% 50V	
C103	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C104	1-163-059-00	CERAMIC MELF 0.01uF 20% 16V	
C105	1-124-477-11	ELECT 47uF 20% 25V	
C106	1-136-173-00	FILM 0.47uF 5% 50V	

TUNER

Ref. No.	Part No.	Description	Remark
C107	1-124-463-00	ELECT 0.1uF 20% 50V	
C108	1-163-063-00	CERAMIC MELF 0.022uF 25V	(G, IT)
C109	1-162-211-31	CERAMIC 33pF 5% 50V	
C121	1-161-379-00	CERAMIC 0.01uF 30% 16V	(G, IT)
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-567-389-11	FILTER, CERAMIC	
CF3	1-567-389-11	FILTER, CERAMIC (G, IT)	
		< OSCILLATOR >	
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)	
		< IF TRANSFORMER >	
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)	
		< CONECTOR >	
* CNJ1	1-564-342-11	SOCKET, CONNECTOR 8P	
* CNJ2	1-564-339-00	PIN, CONNECTOR 5P	
* CNJ3	1-564-341-11	PIN, CONNECTOR 7P	
* CNJ4	1-564-337-00	PIN, CONNECTOR 3P	
		< DIODE >	
D61	8-719-912-20	DIODE 1SS120	
		< FM FRONT END >	
FE1	1-463-857-11	FRONT END, FM (G, IT)	
FE1	1-463-862-21	FRONT END, FM (AEP, UK)	
		< ENCAPSULATED COMPONENT >	
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)	
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)	
		< IC >	
IC21	8-759-821-45	IC LA1851N	
IC81	8-759-820-91	IC LC7218	
		< INDUCTOR >	
L1	1-410-645-31	MICRO INDUCTOR 100uH	
L2	1-410-645-31	MICRO INDUCTOR 100uH (G, IT)	
L21	1-407-500-00	MICRO INDUCTOR 4.7mH	
L61	1-410-525-11	MICRO INDUCTOR 220uH	
		< LOW PASS FILTER >	
LPF21	1-235-164-00	FILTER, LOW PASS	
LPF22	1-235-164-00	FILTER, LOW PASS	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q1	8-729-230-99	TRANSISTOR 2SC2669-0Y	
Q2	8-729-230-99	TRANSISTOR 2SC2669-0Y	
Q3	8-729-230-99	TRANSISTOR 2SC2669-0Y	(G, IT)
Q4	8-729-230-99	TRANSISTOR 2SC2669-0Y	(G, IT)
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR DTA114ES	
Q24	8-729-900-80	TRANSISTOR DTC114ES	
Q26	8-729-900-80	TRANSISTOR DTC114ES	
Q61	8-729-900-80	TRANSISTOR DTC114ES	
Q62	8-729-900-80	TRANSISTOR DTC114ES	
Q63	8-729-900-80	TRANSISTOR DTC114ES	
Q64	8-729-820-24	TRANSISTOR 2SC3330-T	
Q65	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q66	8-729-900-80	TRANSISTOR DTC114ES	
Q81	8-729-900-61	TRANSISTOR DTA114ES	
Q82	8-729-900-80	TRANSISTOR DTC114ES	
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB	
Q85	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB	
		< RESISTOR >	
⚠R1	1-249-397-11	CARBON (SMALL) 22 5% 1/4W F	(G, IT)
⚠R1	1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	(AEP, UK)
R3	1-249-329-11	CARBON MELF 330 5% 1/8W	
R4	1-249-329-11	CARBON MELF 330 5% 1/8W	
R5	1-249-329-11	CARBON MELF 330 5% 1/8W	
R6	1-249-350-11	CARBON MELF 18K 5% 1/8W	
R7	1-249-329-11	CARBON MELF 330 5% 1/8W	
R8	1-249-332-11	CARBON MELF 560 5% 1/8W	
R9	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R10	1-249-329-11	CARBON MELF 330 5% 1/8W	(G,IT)
R11	1-249-350-11	CARBON MELF 18K 5% 1/8W	(G,IT)
R12	1-249-329-11	CARBON MELF 330 5% 1/8W	(G,IT)
R13	1-249-334-11	CARBON MELF 820 5% 1/8W	(G,IT)
R14	1-249-352-11	CARBON MELF 27K 5% 1/8W	(G,IT)
R15	1-249-374-11	CARBON MELF 10K 5% 1/8W	(G,IT)
R16	1-249-343-11	CARBON MELF 4.7K 5% 1/8W	(G,IT)
⚠R21	1-249-404-00	CARBON (SMALL) 82 5% 1/4W F	
R22	1-249-433-11	CARBON (SMALL) 22K 5% 1/4W	
R23	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R24	1-249-353-11	CARBON MELF 33K 5% 1/8W	
R25	1-249-346-11	CARBON MELF 8.2K 5% 1/8W	
R27	1-249-432-11	CARBON (SMALL) 18K 5% 1/4W	
R28	1-249-423-11	CARBON (SMALL) 3.3K 5% 1/4W	
R29	1-249-347-11	CARBON MELF 10K 5% 1/8W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

TUNER DISPLAY CONNECTOR

Ref. No.	Part No.	Description	Remark
R31	1-249-331-11	CARBON MELF 470 5% 1/8W	
R32	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R33	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R34	1-249-437-11	CARBON (SMALL) 47K 5% 1/4W	
R35	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R37	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R38	1-249-363-11	CARBON MELF 220K 5% 1/8W	
R39	1-249-339-11	CARBON MELF 2. 2K 5% 1/8W	
R40	1-249-338-11	CARBON MELF 1. 8K 5% 1/8W	
R41	1-249-344-11	CARBON MELF 5. 6K 5% 1/8W	
R42	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R43	1-249-363-11	CARBON MELF 220K 5% 1/8W	
R44	1-249-339-11	CARBON MELF 2. 2K 5% 1/8W	
R45	1-249-338-11	CARBON MELF 1. 8K 5% 1/8W	
R46	1-249-344-11	CARBON MELF 5. 6K 5% 1/8W	
⚠R47	1-249-409-11	CARBON (SMALL) 220 5% 1/4W F	
R48	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R49	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R61	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R62	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R64	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R65	1-249-355-11	CARBON MELF 47K 5% 1/8W	
R66	1-215-493-00	CARBON MELF 1M 5% 1/5W	
R67	1-249-359-11	CARBON MELF 100K 5% 1/8W	
R68	1-249-352-11	CARBON MELF 27K 5% 1/8W	
R69	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R70	1-249-331-11	CARBON MELF 470 5% 1/8W	
R71	1-249-339-11	CARBON MELF 2. 2K 5% 1/8W	
R72	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R73	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R74	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R75	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
R81	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R82	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R83	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R84	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R85	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R86	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R87	1-249-347-11	CARBON MELF 10K 5% 1/8W	
R88	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
R89	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R90	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
R91	1-249-335-11	CARBON MELF 1K 5% 1/8W	
⚠R92	1-249-401-11	CARBON (SMALL) 47 5% 1/4W F	
R101	1-249-341-11	CARBON MELF 3. 3K 5% 1/8W	
R102	1-249-332-11	CARBON MELF 560 5% 1/8W	
R103	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R104	1-249-328-11	CARBON MELF 270 5% 1/8W	
R105	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	

Ref. No.	Part No.	Description	Remark
R106	1-249-339-11	CARBON MELF 2. 2K 5% 1/8W	
R107	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
R108	1-249-323-11	CARBON MELF 100 5% 1/8W	
R109	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
⚠R110	1-249-405-11	CARBON (SMALL) 100 5% 1/4W F	
R111	1-249-341-11	CARBON MELF 3. 3K 5% 1/8W	
R112	1-249-332-11	CARBON MELF 560 5% 1/8W	
R113	1-249-335-11	CARBON MELF 1K 5% 1/8W	
R114	1-249-328-11	CARBON MELF 270 5% 1/8W	
R115	1-249-351-11	CARBON MELF 22K 5% 1/8W	
R116	1-249-339-11	CARBON MELF 2. 2K 5% 1/8W	
R117	1-249-343-11	CARBON MELF 4. 7K 5% 1/8W	
R118	1-249-323-11	CARBON MELF 100 5% 1/8W	

< VARIABLE RESISTOR >

RV21	1-238-598-11	RES, ADJ, CARBON 2. 2K (AEP, UK)
RV21	1-238-600-11	RES, ADJ, CARBON 10K (G, IT)
RV22	1-238-601-11	RES, ADJ, CARBON 22K
RV24	1-238-601-11	RES, ADJ, CARBON 22K (AEP, UK)
RV24	1-238-602-11	RES, ADJ, CARBON 47K (G, IT)

< TRANSFORMER >

T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR
T23	1-236-465-11	ENCAPSULATED COMPONENT (G, IT)

< TERMINAL >

* TM1	1-537-138-31	TERMINAL BOARD (ANTENNA)

< CONNECTOR PIN >

* TP1	1-560-060-00	PIN, CONNECTOR 2P

< CRYSTAL VIBRATOR >

XT81	1-577-126-11	VIBRATOR, CRYSTAL (7. 2MHz)

****

*	A-4345-967-A	DISPLAY BOARD, COMPLETE (AEP, UK, G)
*	A-4345-970-A	DISPLAY BOARD, COMPLETE (IT)

****

*	1-643-554-11	CONNECTOR BOARD

****

*	4-932-810-11	CUSHION (FL)
*	4-944-441-01	HOLDER (FL TUBE)

< CAPACITOR >

C601	1-124-471-00	ELECT	1000uF	20%	6. 3
C610	1-124-907-11	ELECT	10uF	20%	50V
C701	1-126-177-11	ELECT	100uF	20%	10V
C702	1-164-159-11	CERAMIC	0. 1uF		50V
C704	1-124-463-00	ELECT	0. 1uF	20%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

DISPLAY CONNECTOR

Ref. No.	Part No.	Description			Remark
C705	1-161-494-00	CERAMIC	0.022uF		25V
C706	1-162-198-31	CERAMIC	8.2PF	10%	50V
C707	1-162-198-31	CERAMIC	8.2PF	10%	50V
C710	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-126-157-11	ELECT	10uF	20%	16V
C712	1-126-177-11	ELECT	100uF	20%	10V
C713	1-136-173-00	FILM	0.47uF	5%	50V
C714	1-136-173-00	FILM	0.47uF	5%	50V
C715	1-136-173-00	FILM	0.47uF	5%	50V
C716	1-161-494-00	CERAMIC	0.022uF		25V
C719	1-162-306-11	CERAMIC	0.01uF	20%	16V
C720	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< VIBRATOR >			
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
		< CONNECTOR >			
* CNJ601	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL1)			
* CNJ602	1-564-341-11	PIN, CONNECTOR 7P			
* CNJ603	1-564-337-00	PIN, CONNECTOR 3P			
* CNJ604	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)			
* CNJ701	1-564-342-11	PIN, CONNECTOR 8P			
* CNJ702	1-564-339-00	PIN, CONNECTOR 5P			
		< DIODE >			
D701	8-719-987-63	DIODE	1N4148M		
D702	8-719-987-63	DIODE	1N4148M		
D706	8-719-987-63	DIODE	1N4148M (IT)		
D707	8-719-987-63	DIODE	1N4148M		
D710	8-719-301-39	LED	SEL2210S-D (PRESET)		
D711	8-719-301-39	LED	SEL2210S-D (TUNING)		
D712	8-719-987-63	DIODE	1N4148M		
D714	8-719-987-63	DIODE	1N4148M		
D715	8-719-010-28	DIODE	UZ-4.3BSA		
D716	8-719-987-63	DIODE	1N4148M		
D717	8-719-987-63	DIODE	1N4148M		
D718	8-719-987-63	DIODE	1N4148M		
		< FLUORESCENT INDICATOR >			
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	8-759-059-85	IC	TMP87CC70F		
IC702	8-759-500-31	IC	X24C01P		
IC703	8-749-920-83	IC	GP1U52XB		
IC704	8-759-515-58	IC	PST572H		

Ref. No.	Part No.	Description			Remark
		< COIL >			
L701	1-410-521-11	INDUCTOR	100uH		
L702	1-410-521-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR	DTC114ES		
Q702	8-729-900-80	TRANSISTOR	DTC114ES		
Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q706	8-729-900-80	TRANSISTOR	DTC114ES		
Q707	8-729-620-05	TRANSISTOR	2SC2603-EF		
		< RESISTOR >			
R601	1-249-393-11	CARBON	10	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-417-11	CARBON	1K	5%	1/4W
R703	1-249-417-11	CARBON	1K	5%	1/4W
R704	1-249-417-11	CARBON	1K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-249-423-11	CARBON	3.3K	5%	1/4W
R707	1-249-423-11	CARBON	3.3K	5%	1/4W
R708	1-249-421-11	CARBON	2.2K	5%	1/4W
R709	1-249-423-11	CARBON	3.3K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-249-411-11	CARBON	330	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-417-11	CARBON	1K	5%	1/4W
R716	1-249-429-11	CARBON	10K	5%	1/4W
R717	1-249-425-11	CARBON	4.7K	5%	1/4W
R718	1-249-429-11	CARBON	10K	5%	1/4W
R719	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-249-429-11	CARBON	10K	5%	1/4W
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-249-429-11	CARBON	10K	5%	1/4W
R723	1-249-423-11	CARBON	3.3K	5%	1/4W
R724	1-249-429-11	CARBON	10K	5%	1/4W
R725	1-249-417-11	CARBON	1K	5%	1/4W
R726	1-249-417-11	CARBON	1K	5%	1/4W
R727	1-249-417-11	CARBON	1K	5%	1/4W
R728	1-249-417-11	CARBON	1K	5%	1/4W
R729	1-249-417-11	CARBON	1K	5%	1/4W
R730	1-249-417-11	CARBON	1K	5%	1/4W
R731	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-429-11	CARBON	10K	5%	1/4W
R733	1-249-429-11	CARBON	10K	5%	1/4W
R734	1-249-417-11	CARBON	1K	5%	1/4W
R736	1-249-429-11	CARBON	10K	5%	1/4W
R737	1-249-409-11	CARBON	220	5%	1/4W

DISPLAY CONNECTOR

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 1)	
S702	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 2)	
S703	1-554-303-21	SWITCH, TACTILE (REC TIMER)	
S705	1-554-303-21	SWITCH, TACTILE (MEMORY/NEXT)	
S706	1-554-303-21	SWITCH, TACTILE (MODE)	
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)	
S708	1-554-303-21	SWITCH, TACTILE (BAND)	
S709	1-554-303-21	SWITCH, TACTILE (-)	
S710	1-554-303-21	SWITCH, TACTILE (+)	
		< VIBRATOR >	
XT701	1-527-997-21	VIBRATOR, CRYSTAL (32KHz)	

****

English
92C0450-1
Printed in Japan
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9-957-003-11

Sony Corporation
Audio Group

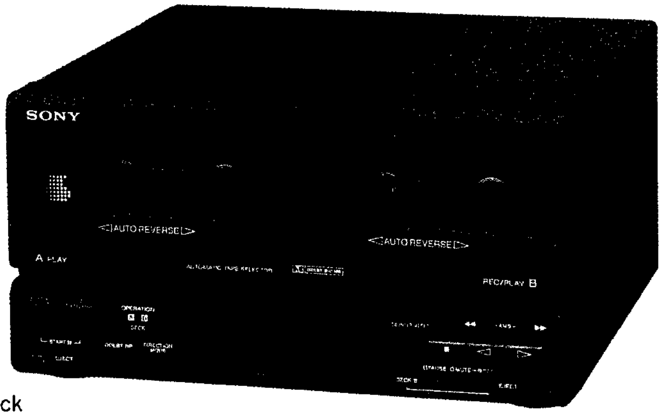
Published by Customer Relations and Service Group

TC-H2700/H3700

SERVICE MANUAL

AEP Model
UK Model
TC-H2700/H3700

E Model
Australian Model
Tourist Model
TC-H2700



Discard TC-H3700
Service Manual
(No. 9-956-999-11)
Priviously issued.
This Service Manual
contains it.

This set is the cassette deck
section in FH-E757, MHC-2700/3700.

Model Name Using Similar Mechanism			TC-H2600/H6600
Tape Transport Mechanism Type		DECK A	TCM-190RA13A
	EXCEPT H3700: UK, G	DECK B	TCM-190RB22A
	H3700 : UK, G	DECK B	TCM-190RB12A

• G: Germany model

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF) 40 — 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S) 40 — 14,000 Hz (±3 dB), using TYPE II cassette 40 — 15,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Inputs	PHONO (phono jacks): sensitivity 2.5 mV, impedance 47 kilohms DAT (phono jacks): sensitivity 450 mV, impedance 47 kiolhms VIDEO (phono jacks): sensitivity 300 mV, impedance 47 kilohms

Design and specifications subject to change without notice.

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
  "DOLBY", the double-D symbol ▯▯, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

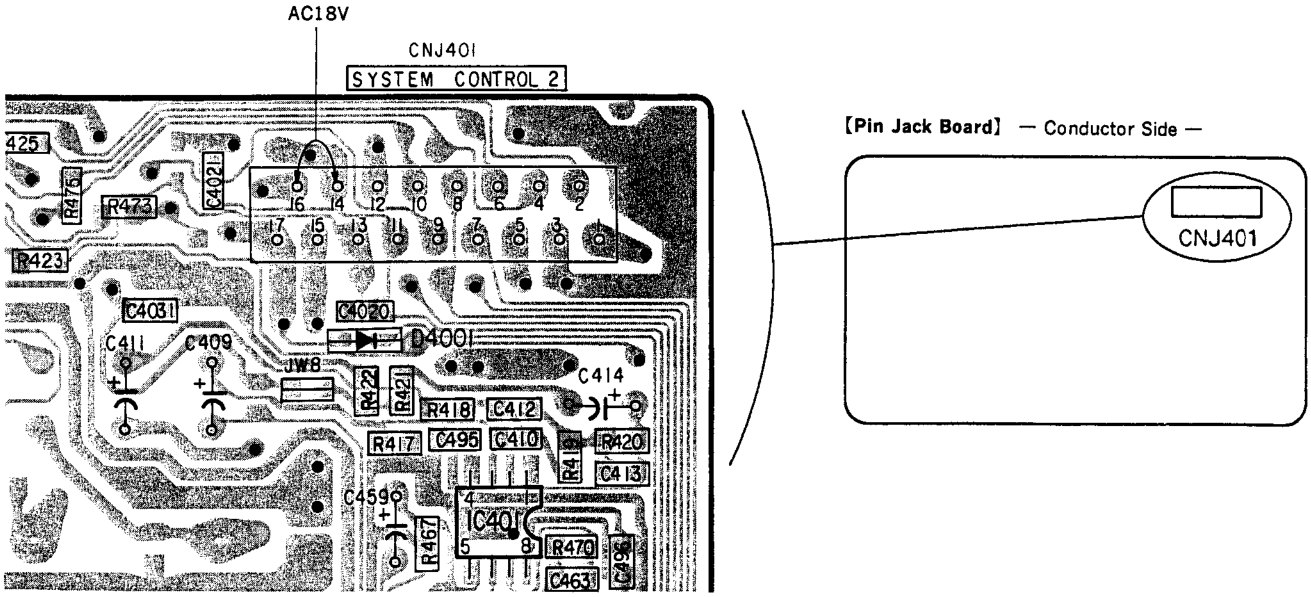
MICROFILM

STEREO CASSETTE DECK

SONY®

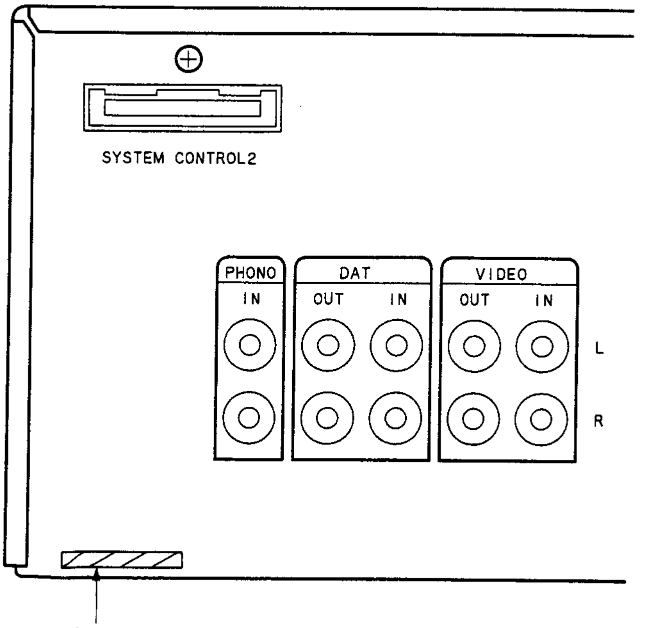
CAUTION WHEN REPAIRING

Normally the power of this set is supplied from the TA-H2700/H3700 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.


AC18V
CNJ401
SYSTEM CONTROL 2
【Pin Jack Board】 — Conductor Side —
CNJ401
R425
R475
R473
C4021
R423
C4031
C411
C409
JW8
C4020
D4001
R422
R421
R418
C412
C414
R417
C495
C410
R419
R420
C413
C459
R467
IC401
R470
C463
C496

MODEL IDENTIFICATION

— BACK PANEL —


SYSTEM CONTROL2
PHONO
IN
DAT
OUT
IN
VIDEO
OUT
IN
L
R

3-374-471-21 (AE) : H3700: AEP model
3-374-471-31 (AE4): H3700: Germany model
3-374-471-41 (AE) : H2700: AEP, UK, E, Australian, Tourist model
3-374-471-51 (AE4): H2700: Germany model
3-375-041-51 (UK) : H3700: UK model

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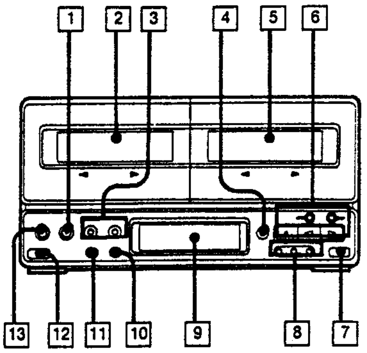
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION

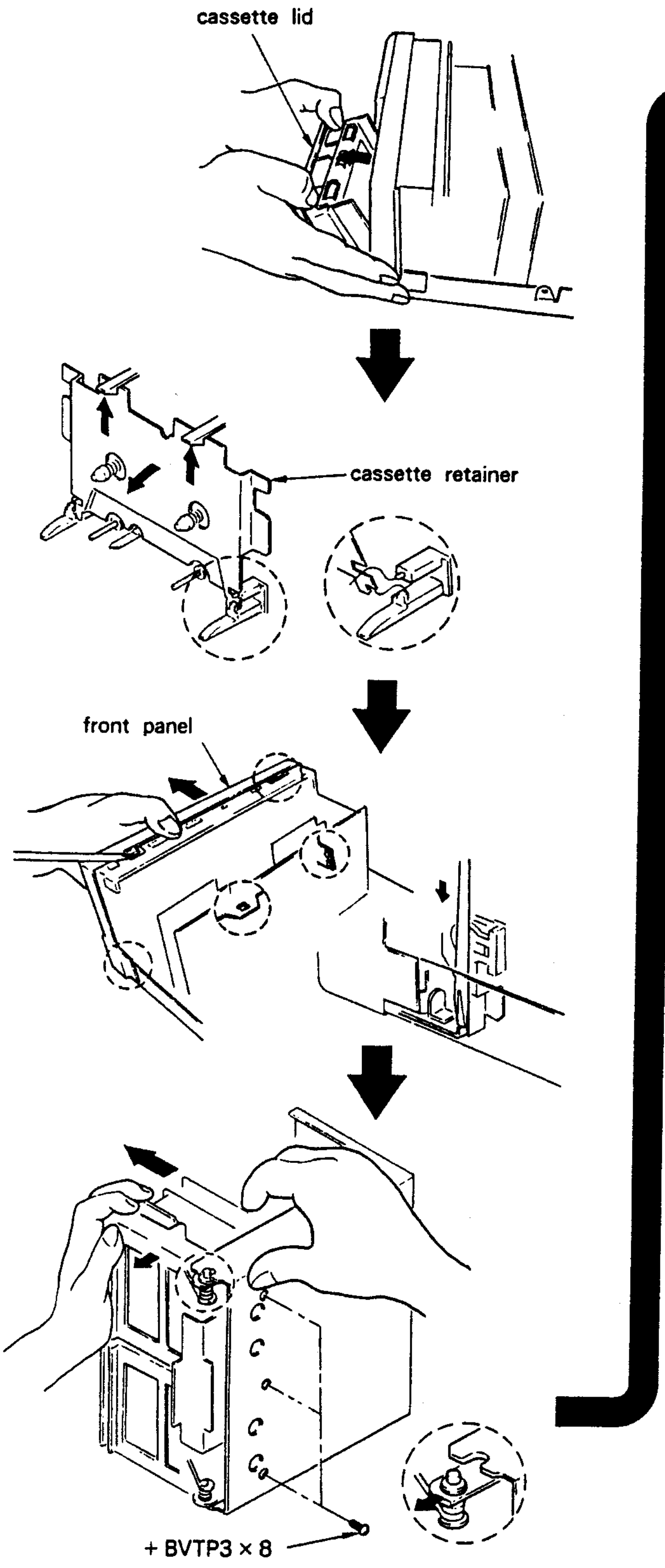


[1] CD SYNCHRO (CD synchronized recording) button and indicator ㊺ ㊽
[2] Cassette holder (Deck A)
[3] DECK A/B selector ㉚
[4] COUNTER RESET button ㉚
Resets the counter of the cassette deck to "0".
[5] Cassette holder (Deck B)
[6] Tape operation buttons (for Deck A and B)
AMS ◀◀ ▶▶ : Fast winding
■ : Stop
▷ : Forward play
◁ : Reverse play
[7] ⏏ EJECT button (Deck B)
[8] Tape operation buttons (for Deck B)
II : PAUSE
○ : MUTE (Muting)
● : REC (recording)
[9] Display window
[10] DIRECTION MODE selector ㉚ ㉝
[11] DOLBY NR (Dolby Noise Reduction) ㉛
[12] ⏏ EJECT button (Deck A)
[13] DUBBING MODE button and indicator ㊵

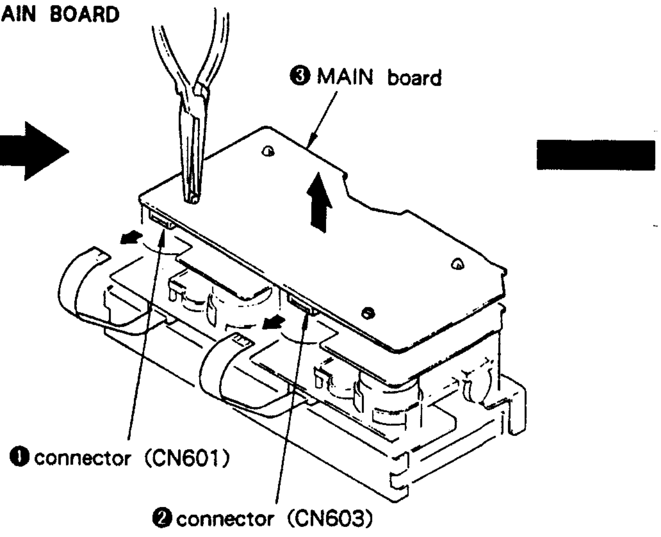
SECTION 2
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

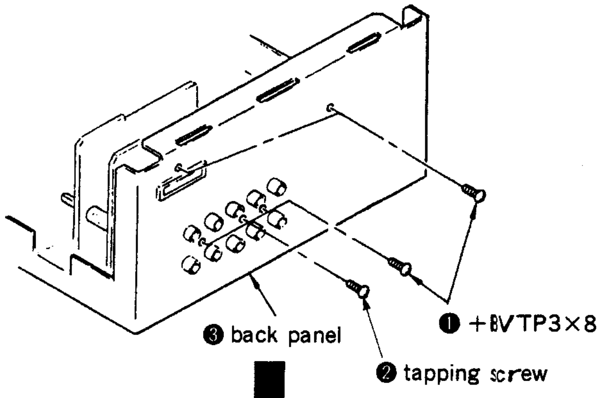
- **FRONT PANEL**

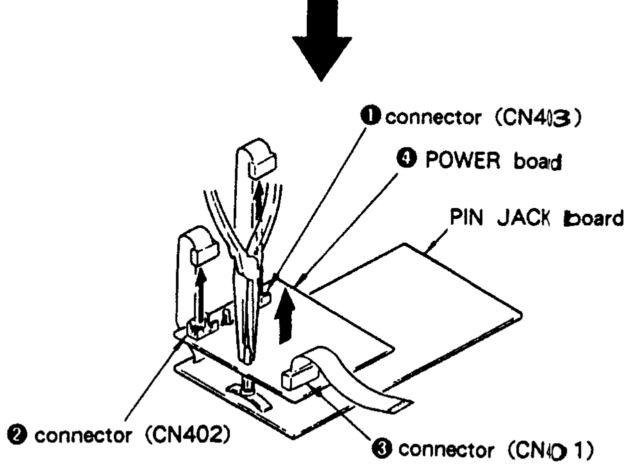

cassette lid
cassette retainer
front panel
+ BVTP3 × 8

- **MAIN BOARD**

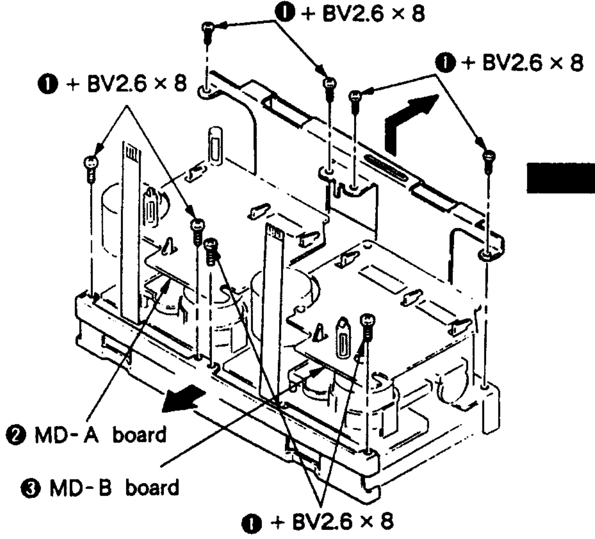

❸ MAIN board
❶ connector (CN601)
❷ connector (CN603)

- **PIN JACK/POWER BOARD**

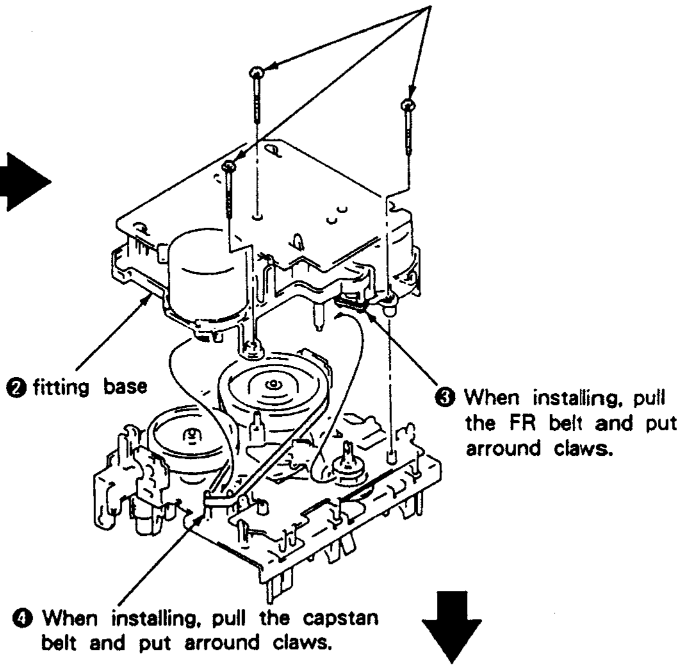

❸ back panel
❶ +BVTP3×8
❷ tapping screw

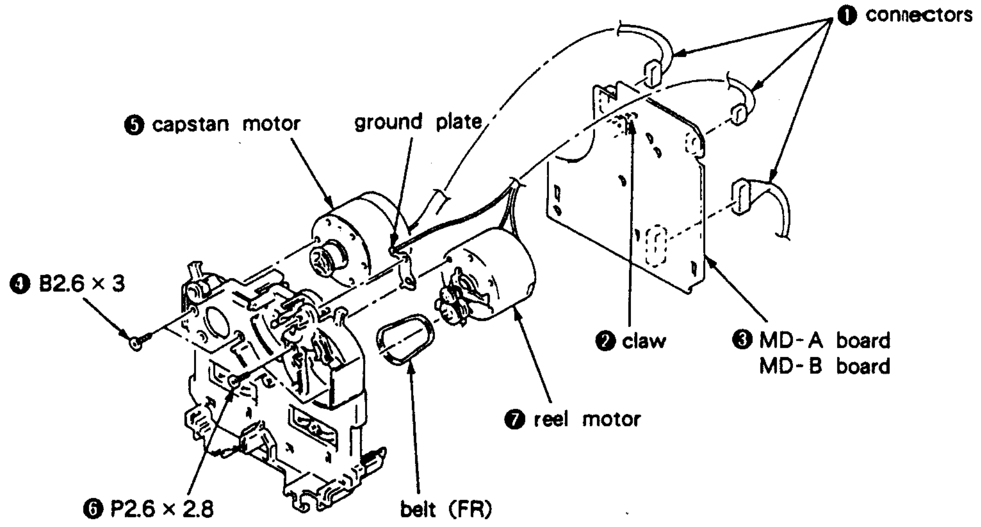

❶ connector (CN403)
❹ POWER board
PIN JACK board
❷ connector (CN402)
❸ connector (CN401)

- **MECHANISM DECK**

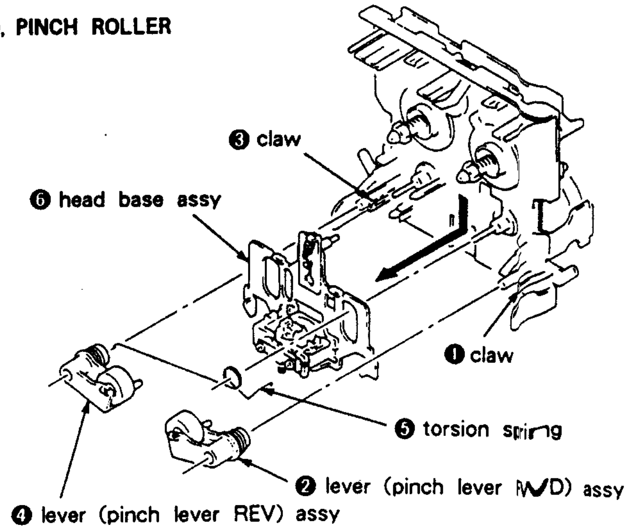

❶ + BV2.6 × 8
❶ + BV2.6 × 8
❶ + BV2.6 × 8
❷ MD-A board
❸ MD-B board
❶ + BV2.6 × 8

- **CAPSTAN/REEL MOTOR**


❶ PTPWH2 × 23
❷ fitting base
❸ When installing, pull the FR belt and put arround claws.
❹ When installing, pull the capstan belt and put arround claws.


❶ connectors
❺ capstan motor
ground plate
❹ B2.6 × 3
❷ claw
❸ MD-A board
MD-B board
❼ reel motor
❻ P2.6 × 2.8
belt (FR)

- **HEAD, PINCH ROLLER**


❸ claw
❻ head base assy
❶ claw
❺ torsion spring
❷ lever (pinch lever FWD) assy
❹ lever (pinch lever REV) assy

SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcoholmoistened swad:

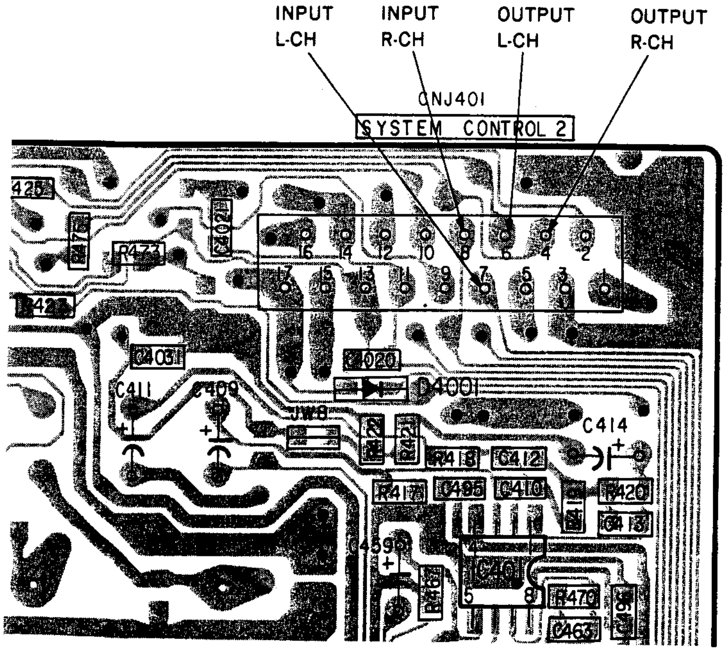
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g • cm (0.49 to 0.83 oz • inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.03 to 0.08oz • inch)
Reverse	CQ-102RC	35 to 60g • cm (0.49 to 0.83oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.03 to 0.08oz • inch)
Forward, Reverse	CQ-201B	70 to 110g • cm (0.98 to 1.52 oz • inch)

LINE IN/OUT Terminal (CNJ401)


INPUT L-CH
INPUT R-CH
OUTPUT L-CH
OUTPUT R-CH
CNJ401
SYSTEM CONTROL 2
R473
C402
C403
C411
C409
JW8
D400
C414
R418
C412
R417
C410
R420
C413
C459
IC401
R470
C463

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
   DOLBY NR switch: OFF

Test Tape

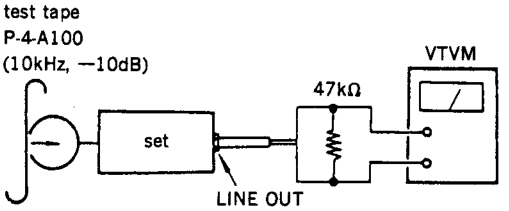
Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

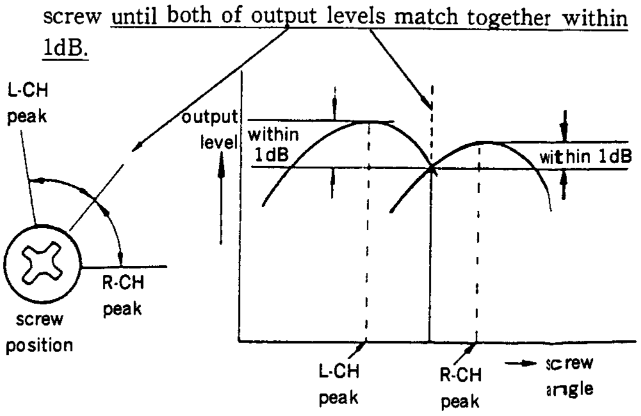
DECK A **DECK B**

Procedure:

1. Forward Playback Mode

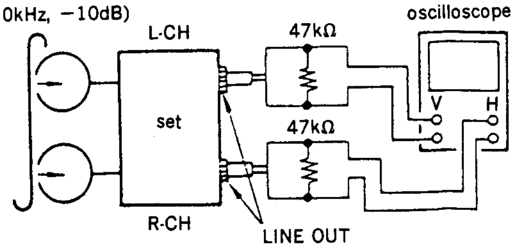

test tape
P-4-A100
(10kHz, −10dB)
VTVM
47kΩ
set
LINE OUT

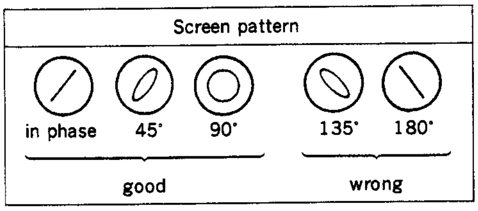
2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.


L-CH peak
output level
within 1dB
within 1dB
R-CH peak
screw position
L-CH peak
R-CH peak
screw angle

3. Playback Mode

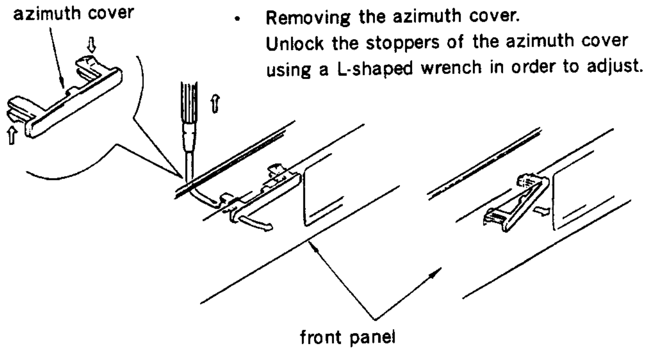
test tape
P-4-A100
(10kHz, −10dB)


oscilloscope
L-CH
47kΩ
set
47kΩ
V
H
R-CH
LINE OUT

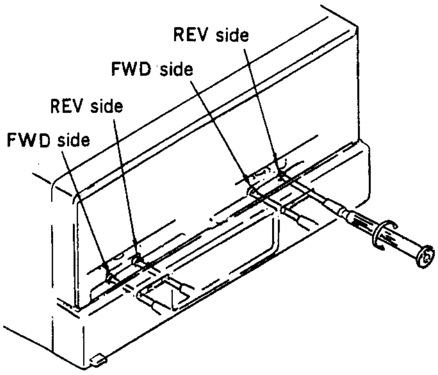

Screen pattern
in phase
45°
90°
135°
180°
good
wrong

4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : —record/playback head—


azimuth cover
front panel

- Removing the azimuth cover.
  Unlock the stoppers of the azimuth cover using a L-shaped wrench in order to adjust.

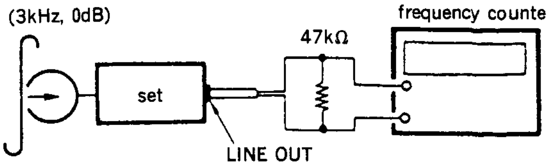

REV side
FWD side
REV side
FWD side

Tape Speed Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—

test tape
WS-48B
(3kHz, 0dB)


frequency counter
47kΩ
set
LINE OUT

Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Short TP601 (main board) when the power is OFF.
2. Turn on the power and put the deck A into the FWD mode.
3. Connect a 150Ω resistor to both the terminals of TP6001 (main board). (The set enters into high speed playback mode.)
4. Adjust RV72A (H) of the deck A so that a reading of the frequency counter meets the adjustment value.
5. Adjust the RV72B (H) of deck B performing steps 2 to 5 as deck A.
6. After the adjustment is completed, remove the short of TP601 and 150Ω resistor of TP6001.

(Normal speed adjustment)

1. Put the set into the FWD playback mode.
2. At this time, adjust RV71A (L) of the deck A and RV71B (L) of the deck B so that a reading of the frequency counter meets the adjustment value.

Adjustment Limits :

Speed	Frequency Counter Reading
High	6,000 ± 20Hz
Normal	3,000 ± 10Hz

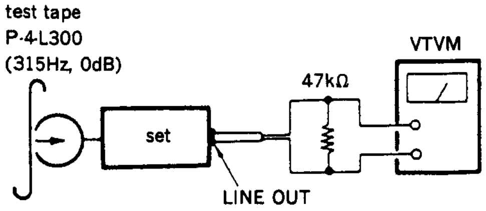
Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location : MD-A Board
MD-B Board (H2700, H3700 : AEP)
MD-B HX PRO Board
(H3700 : UK, Germany)

Playback Level Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—


test tape
P-4-L300
(315Hz, 0dB)
VTVM
47kΩ
set
LINE OUT

Adjust deck A : RV11A (L-CH), RV21A (R-CH) and deck B : RV11B (L-CH), RV21B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits :

LINE OUT level : −10 ± 0.5dB (0.23 to 0.26V)

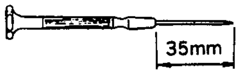
Level Difference between Channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

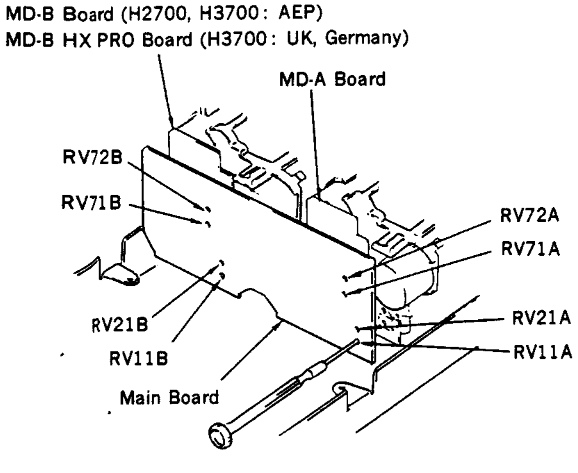
Adjustment Location : MD-A Board
MD-B Board (H2700, H3700 : AEP)
MD-B HX PRO Board
(H3700 : UK, Germany)

Tape Speed/playback Level Adjustment

Screwdriver to adjust the MD block



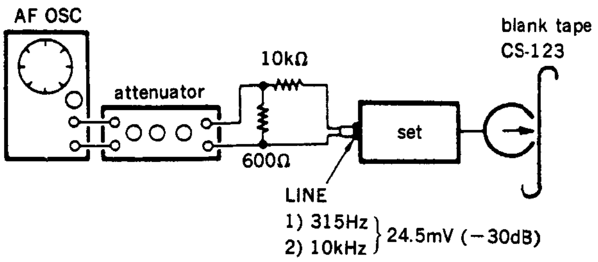
The MD block adjustment can be performed by inserting a screwdriver of which axis length (not including the shaft) is 35 mm or more through the rear side of the main board.


MD-B Board (H2700, H3700 : AEP)
MD-B HX PRO Board (H3700 : UK, Germany)
MD-A Board
RV72B
RV71B
RV72A
RV71A
RV21B
RV11B
RV21A
RV11A
Main Board

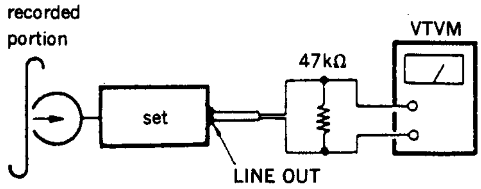
Record Bias Adjustment DECK B

Procedure :

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE
1) 315Hz
2) 10kHz
24.5mV (−30dB)

2. Playback Mode


recorded
portion
VTVM
47kΩ
set
LINE OUT

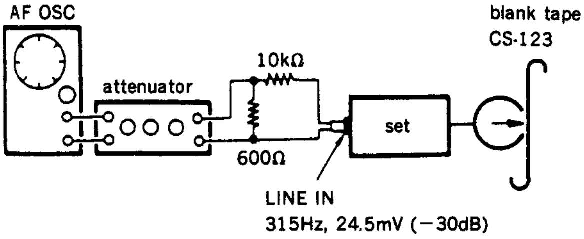
Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB (0.732 to 0.821V) relative to the 315Hz output. if necessary. adjust RV12 (L-CH), RV22 (R-CH) (MD-B board (H2700, H3700 : AEP)) or RV81 (L-CH), RV91 (R-CH) (MD-B HX PRO board (H3700 : UK, Germany)) and repeat the steps given above.

Adjustment Location : MD-B Board (H2700, H3700 : AEP)
MD-B HX PRO Board
(H3700 : UK, Germany)

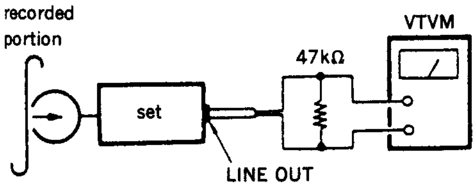
Record Level Adjustment DECK B

Procedure :

1. Record Mode


AF OSC
attenuator
10kΩ
600Ω
set
blank tape
CS-123
LINE IN
315Hz, 24.5mV (−30dB)

2. Playback Mode


recorded
portion
set
47kΩ
VTVM
LINE OUT

Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat steps 1 and 2.

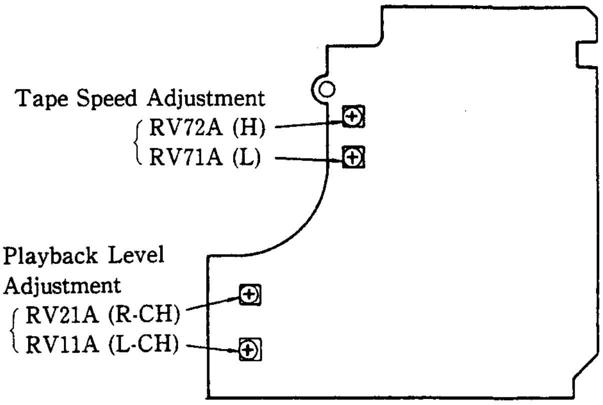
Adjustment Limits :

LINE OUT level : −30 ± 0.5dB (23 to 26mV)

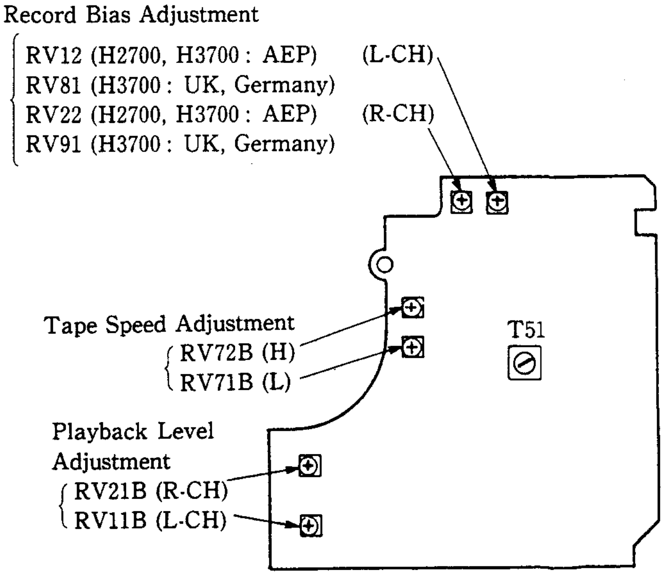
Adjustment Location : main board

Adjustment Location :

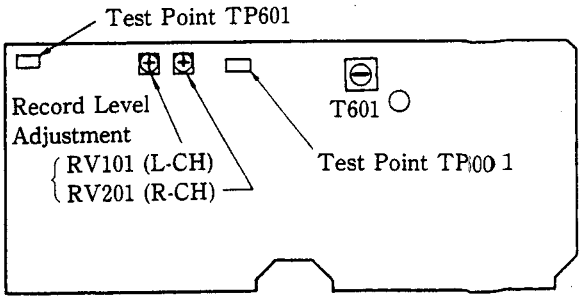
[MD-A Board] —Component Side—


Tape Speed Adjustment
RV72A (H)
RV71A (L)
Playback Level
Adjustment
RV21A (R-CH)
RV11A (L-CH)

[MD-B Board] (H2700, H3700 : AEP)
[MD-B HX PRO Board] (H3700 : UK, Germany)
—Component Side—


Record Bias Adjustment
RV12 (H2700, H3700 : AEP)
RV81 (H3700 : UK, Germany)
RV22 (H2700, H3700 : AEP)
RV91 (H3700 : UK, Germany)
(L-CH)
(R-CH)
Tape Speed Adjustment
RV72B (H)
RV71B (L)
T51
Playback Level
Adjustment
RV21B (R-CH)
RV11B (L-CH)

[Main Board] —Component Side—


Test Point TP601
Record Level
Adjustment
RV101 (L-CH)
RV201 (R-CH)
T601
Test Point TP600 1

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

IC351 display microprocessor HD614023-FA93

Fluorescent indicator tube is activated by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1—11	S10—S0	O	FL indicator tube (FL351) segment output
12			Not used. (+5.6V)
13	VDISP	—	Power supply for activating the FL indicator tube (−20V)
14—15			Not used (GND)
16	SYNC	I	Interrupt input. Data transmission from IC601 (system controller) is checked.
17	INT	I	Not used. (GND)
18—25		I	Not used. (GND)
26	V_{CC}	—	Power supply terminal (+5.6V)
27	CLK	I	Data transmission clock input from IC601 (system controller)
28	DATA	I	Serial data input from IC601 (system controller)
29	SYNC	I	Sync signal input which indicates the first byte of data sent from IC601 (system controller)
30		—	Not used. (GND)
31	KEY A	O	LED (D303) light output in the deck A.
32	KEY B	O	LED (D304) light output in the deck B.
33	HIGH DUB	O	LED (D301) light output in the high speed dubbing mode.
34	NORM DUB	O	LED (D301) light output in the normal speed dubbing mode.
35	CD SYNC	O	LED (D302) light output in the CD synchro mode.
36—38			Not used. (GND)
39	FLCHECK	I	All the FL indicator tubes are lit when this port is set to "L". (Normally +5.6V)
40—42			Not used. (GND)
43	RESET	I	Reset input from IC601 (system controller). "L" : Reset.
44	TEST	I	Not used. (+5.6V)
45	OSC1	I	Clock input (4.19MHz)
46	OSC2	O	Clock output
47	GND	—	Power supply terminal (GND)
48—50			Not used. (GND)
51			Not used. (Pull-up)
52—57	G0—G6	O	FL indicator tube (FL351) grid output
58—61			Not used. (+5.6V)
62—64	S11—S13	O	FL indicator tube (FL351) segment output

IC406 selector controller M50760-315FP

AV output is switched with the audio pass signal sent from the amplifier (TA-H2700/H3700).

Pin No.	Pin Name	I/O	Description
1	D3	I	Model selection input port. Connected to GND.
2	A0	O	Audio IN switch (IC403 and IC404) control output port.
3			Not used.
4	A1	O	Audio IN switch (IC403 and IC404) control output port.
5	CNV_{SS}	—	Power supply terminal (GND)
6	V_{SS}	—	Power supply terminal (GND)
7	A2	O	Audio IN switch (IC403 and IC404) control output port.
8	B0	O	Audio OUT switch (IC405) control output port.
9	B1	O	Audio OUT switch (IC405) control output port.
10			Not used.
11, 12			Not used.
13, 14			Not used. (GND)
15			Not used.
16	RESET	I	Reset input. "L" : Reset
17	XOUT	O	Clock output.
18	XIN	I	Clock input.
19	S	I	Serial data input (audio bus)
20	D2	I	Serial data input (audio bus)
21	S1	I	Model selection input port. Connected to GND.
22			Not used.
23	VD0	I	Model selection input port. Connected to GND.
24	V_{DD}	—	Power supply terminal (+5V)

IC601 system controller M50944-128FP

The system is wholly controlled by communication between IC351 (display microcessor) and IC602 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	KEY2	I	Not used. (GND)
2	KEY1	I	Not used. (GND)
3	SYNC	O	Synchro signal input which indicates the first byte of data sent to IC351 (display microprocessor).
4	FL-SCK	O	Data transmission clock output to IC351 (display microprocessor).
5	FL-SO	O	Serial date output to IC351 (display microprtcessor).
6	AU-BUS	O	Audio pass output.
7	AU-BUS	I	Audio pass input (negative edge).
8	POWER-IN	I	Power-off detection input. “L” : Power OFF.
9	PB-SELECT	O	Deck A/B switch output in the playback mode. “L” : deck B, “H” : deck A.
10	AMS-SELECT	O	AMS amplifier input switch output
11	MD-REQ	I	Data request input from IC602 (mechanism controller)
12	MD-SCLK	O	Data transmission clock output to IC602 (mechanism controller)
13	MD-SO	O	Serial data output to IC602 (mechanism controller)
14	MD-SI	I	Serial data input from IC602 (mechanism controller)
15		O	Not used. (GND)
16	RESET (MD)	O	IC602 (mechanism controller) reset signal output.
17	AU-BUS	I	Audio bus input (positive-edge)
18	RESET (DSP)	O	IC351 (display microprocessor) reset signal output.
19	GND	—	Power supply terminal. (GND)
20	RESET	I	System reset input. “L” : Reset.
21	X-IN	I	Clock input (4MHz)
22	X-OUT	O	Clock output
23	XC-IN	I	Not used. (GND)
24	XC-OUT	O	Not used. (open)
25	VSS	—	Power supply terminal (GND)
26	N. C.		Not used. (open)
27	TEST	I	Electrical adjustment test mode setting input This set enters into the test mode when the power is on and it is set to “L”. ＊1
28	VAR SELECT	I	Not used. (pull-up)
29	METAL (B)	I	Metal switch (S83) input for deck B. “H” : Metal.
30	70μ (B)	I	Chrome switch (S82) input for deck B. “L” : Normal.
31	PPOWER-ON	O	Not used. (opes)
32—35			Not used. (GND)
36	70μ (A)	I	Chrome switch (S83) input for deck A. “L” : Normal.
37	AMS IN	I	Signal input from the AMS amplifier. “H” : Detected, “L” : Not detected.
38	N. C.		Not used. (GND)
39			Not used. (GND)
40	EQ-HIGH	O	REC equalizer characteristic switch output “H” : High speed, “L” : Normal speed.
41	BIAS FADE	O	Not used. (GND)
42	BIAS (B)	O	Bias ON/OFF switch output. “H” : OFF, “L” : ON.
43	TYPE II (B)	O	Not used. (GND)
44	TYPE I (B)	O	Not used. (GND)
45	R.MUTE (B)	O	REC mute control output. “L” : Mute ON, “H” : Mute OFF.
46	RELAY (B)	O	Mechanism deck head switch control output. “L” : ON.
47	DOLBY B	O	Dolby B/C switch control output. “L” : Dolby C, “H” : Dolby B.
48	DOLBY ON	O	Dolby ON/OFF switch control output. “L” : ON, “H” : OFF.
49	REC/PB	O	Dolby amplifier REC/PB switch output. “L” : REC, “H” : PB.
50			Not used. (open)
51	PB 70μ	O	Playback equalizer characterstic switch output. “H”: normal, “L”: chrome/metal.
52	AMS/BS	O	Not used.
53	PASS	O	PASS amplifier switch output for LINE OUT. “L”: PASS amplifier, “H”: Through.

Pin No.	Pin Name	I/O	Description
54	LINE-MUTE	O	Line mute control output. "L" : MUTE OFF, "H" : MUTE ON
55	AVCC	—	Power supply terminal. (+5V)
56	VCC	—	Power supply terminal. (+5V)
57	AVSS	—	Power supply terminal (GND)
58	V.REF	I	Reference voltage input for A/D input port (+5V)
59	METER (R)	I	Level meter signal input (R-CH)
60	METER (L)	I	Level meter signal input (L-CH)
61	VOL DATA	I	Not used. (GND)
62	KEY5	I	Not used. (GND)
63	KEY4	I	Key input. (analog) * 2
64	KEY3	I	Key input. (analog) * 2

* 1 Test mode

When the power is on and pin ㉗ is set to "L" Short TP601. (main board), the set enters the electrical adjustment test mode and the followings can be available.

(1) High speed playback

When deck A or B is in the playback mode and a 150Ω resistor is connected to both the terminals of TP6001 (main board), the set can be entered the high speed playback mode.

(2) Source monitor

Recording signals can be monitored through the LINE OUT terminal (see page 6.) because the line short is removed in recording.

(3) Recording memory

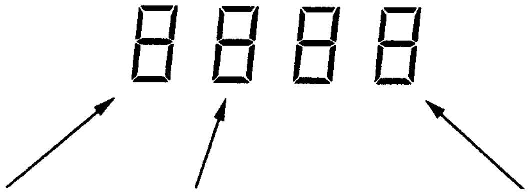
Recording memory is set to ON when the tape counter is reset at the record start point.

(4) Mode display

The counter displays as shown in the figure A when the counter mode is set to the deck A and the deck A button of deck A/B switch is pressed, or when the counter mode is the deck B and the deck B button is pressed.

(5) When this terminal is set back to "H" after it is set to the test mode in "L" of the power-on mode, all the FL indicator tubes are lit.

(The mechanism block continues to operate as before it is set to "H".)



Key input (pin (64), KEY3)
"0" : DUBBING MODE
"3" : □
"4" : ▷
"5" : ◁
"6" : ▯▯
"7" : REC MUTE
"8" : DIRECTION MODE

Key input (pin (63), KEY4)
"0" : CD SYNCHRO
"1" : ▷▷
"2" : ◁◁
"3" : ● REC
"4" : KEY COUNTER B
"5" : KEY COUNTER A
"6" : COUNTER RESET
"8" : DOLBY NR

AMS signal
"1" : Component is detected.
"0" : Component is not detected.

Figure A

* 2 Key input (analog port)

Voltage(V) / Input port	0	0.3	0.7	1.2	1.7	2.3	2.8	3.3	4.0
Pin (63), KEY4	CD SYNCHRO	◁◁	▷▷	● REC	KEY COUNTER B	KEY COUNTER A	COUNTER RESET		DOLBY NR
Pin (64), KEY3	DUBBING MODE			□	▷	◁	▯▯ PAUSE	O REC MUTE	DIRECTION MODE

IC602 mechanism controller M50925-482FP

The mechanism deck is controlled by receiving data from IC601 (system controller).

Pin No.	Pin Name	I/O	Description
1	RESET	I	Reset input from IC601 (system controller). “L” : Reset.
2	STOP-A	I	Deck A stop switch (S81) input. “H” : Stop.
3	AVSS	—	Power supply terminal (GND)
4	Vref	I	A/D inpout port reference voltage input.
5	A/D. IN-B	I	Deck B leaf switch input (analog). ∗ 1
6	A/D. IN-A	I	Deck A leaf switch input (analog). ∗ 1
7	AVDD	—	Power supply terminal. (+5V)
8	N. C.		
9	T. REEL-B	I	Not used. (GND)
10	S. REEL-B	I	Deck B supply reel table sensor (IC81)
11	T. REEL-A	I	Not used. (GND)
12	S. REEL-A	I	Deck A supply reel table sensor (IC81)
13, 14	N. C.		
15	CM. ON-A	O	Deck A capstan motor (M102) ON/OFF control output. “L” : OFF, “H” : ON.
16	CM. ON-B	O	Deck B capstan motor (M102) ON/OFF control output. “L” : OFF, “H” : ON.
17	GND	—	Power supply terminal. (GND)
18	VSS	—	Power supply terminal. (GND)
19	CM. H/L	O	Capstan motor (M102) speed switch output. “H” : High speed, “L“ : Normal.
20	FWD-B	O	Deck B reel motor control output. ∗ 2 The reel motor is activated by combining these three outputs.
21	FF-B	O	
22	TRIG-B	O	
23	FWD-A	O	Deck A reel motor control output. ∗ 2 The reel motor is activated by combining these three outputs.
24	FF-A	O	
25	TRIG-A	O	
26	N. C.		
27	S. REQ	O	Data request output to IC601 (system controller).
28	S. CLK	I	Data transmission clock input from IC601 (system controller).
29	S. OUT	O	Serial data output to IC601 (system controller).
30	S. IN	I	Serial data input from IC601 (system controller).
31, 32	N. C.		
33	XOUT	O	Clock output.
34	XIN	I	Clock input.
35	STOP-B	I	Deck B stop switch (S81) input. “H” : Stop.
36	VDD	—	Power supply terminal. (+5V)

∗ 1 HALF, REC safety tab leaf switch input

Voltage(V) / Leaf switch		1	1.9	2.8	3.9	5
Harf	S86	ON				OFF
REC safety tab, side A	S84	OFF	ON	OFF	ON	OFF
REC safety tab, side B	S85	ON	ON	OFF	OFF	OFF
		↑ REC available for only side B.	↑ REC available for both sides	↑ REC inhibit for both sides A and B.	↑ REC available for only side A.	↑ Tape is not set.

Tape is set.

∗ 2 Reel motor drive

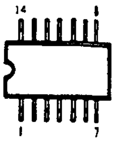
Mode / Output port	FF	TRIG (kick)	STOP	FWD
Pins ㉑and㉔ FF	L	H	L	L
Pins ㉒and㉕ TRIG	H	L	L	H
Pins ⑳and㉓ FWD	H	H	L	L

Reel motor drive amplifier output voltage

Output	Voltage
TRIG	+6V
FF, REW	−5V
FWD	−3V

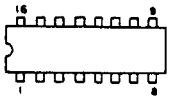
5-2. SEMICONDUCTOR LEAD LAYOUTS

BA3308F
CD4066BCM



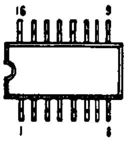
(TOP VIEW)

BA7625
HD14053BFP



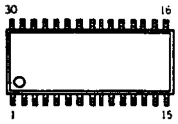
(TOP VIEW)

CD4052BCM
CXA1578M
MC14051BF



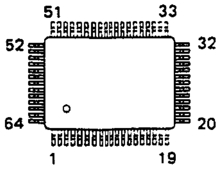
(TOP VIEW)

CXA1331M



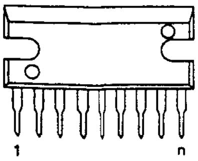
(TOP VIEW)

HD614023-FA93
M50944-128FP

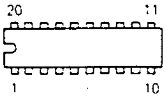

51
33
52
32
64
20
1
19

(TOP VIEW)

LA5603-S

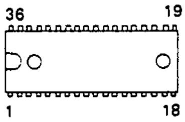


M50760-315FP



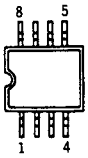
(TOP VIEW)

M50925-482FP



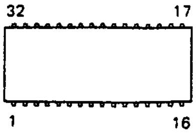
(TOPVIEW)

M51953BFP
μPC4570G2

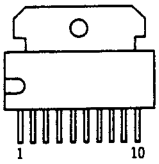


(TOP VIEW)

M5218AFP

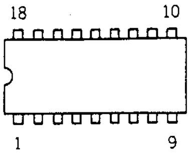


TA7272P



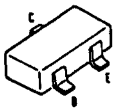
marking side view

μPC1297CA

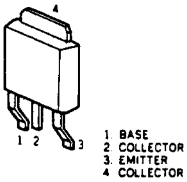


(TOP VIEW)

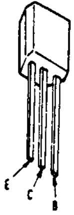
FA1A4M-L33
FA1A4Z-L68
2SA1162
2SA1602-F
2SC3395
2SC4154-F



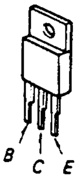
2SA1341


4
1
2
3
1 BASE
2 COLLECTOR
3. EMITTER
4 COLLECTOR

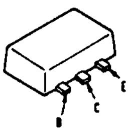
2SA1344



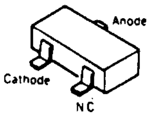
2SB1094-LK
2SD2012



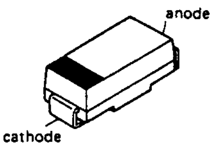
2SB1122-S
2SD1622-S



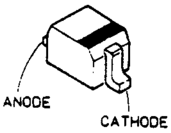
DCA010


Anode
Cathode
NC

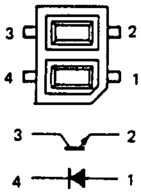
EC10DS2
EC10QS-04


anode
cathode

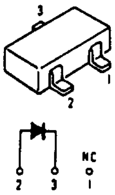
MA8056
1SS352


ANODE
CATHODE

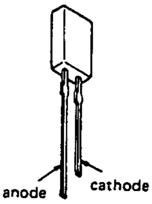
NJL5165K-B



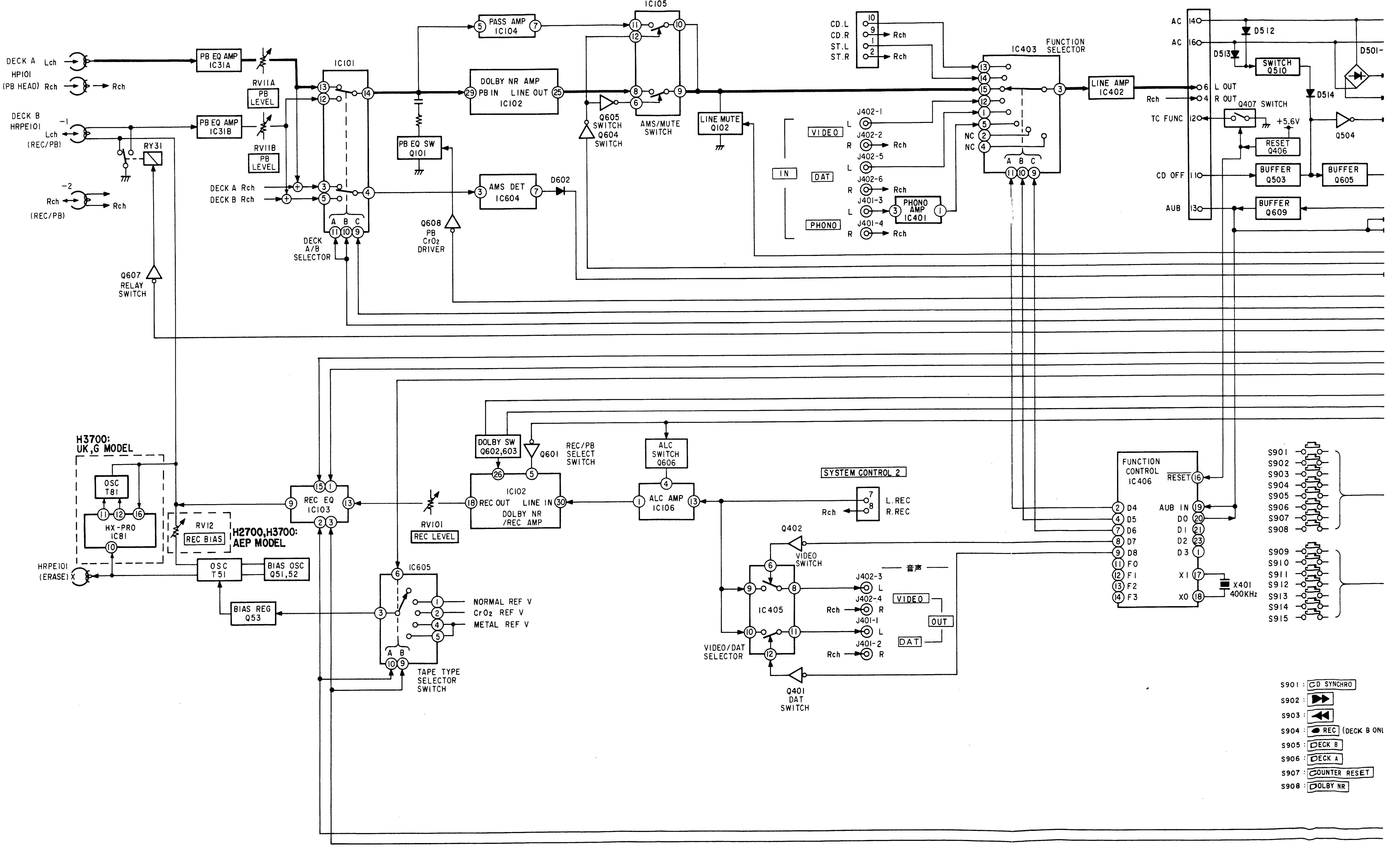
UZM8.2Z



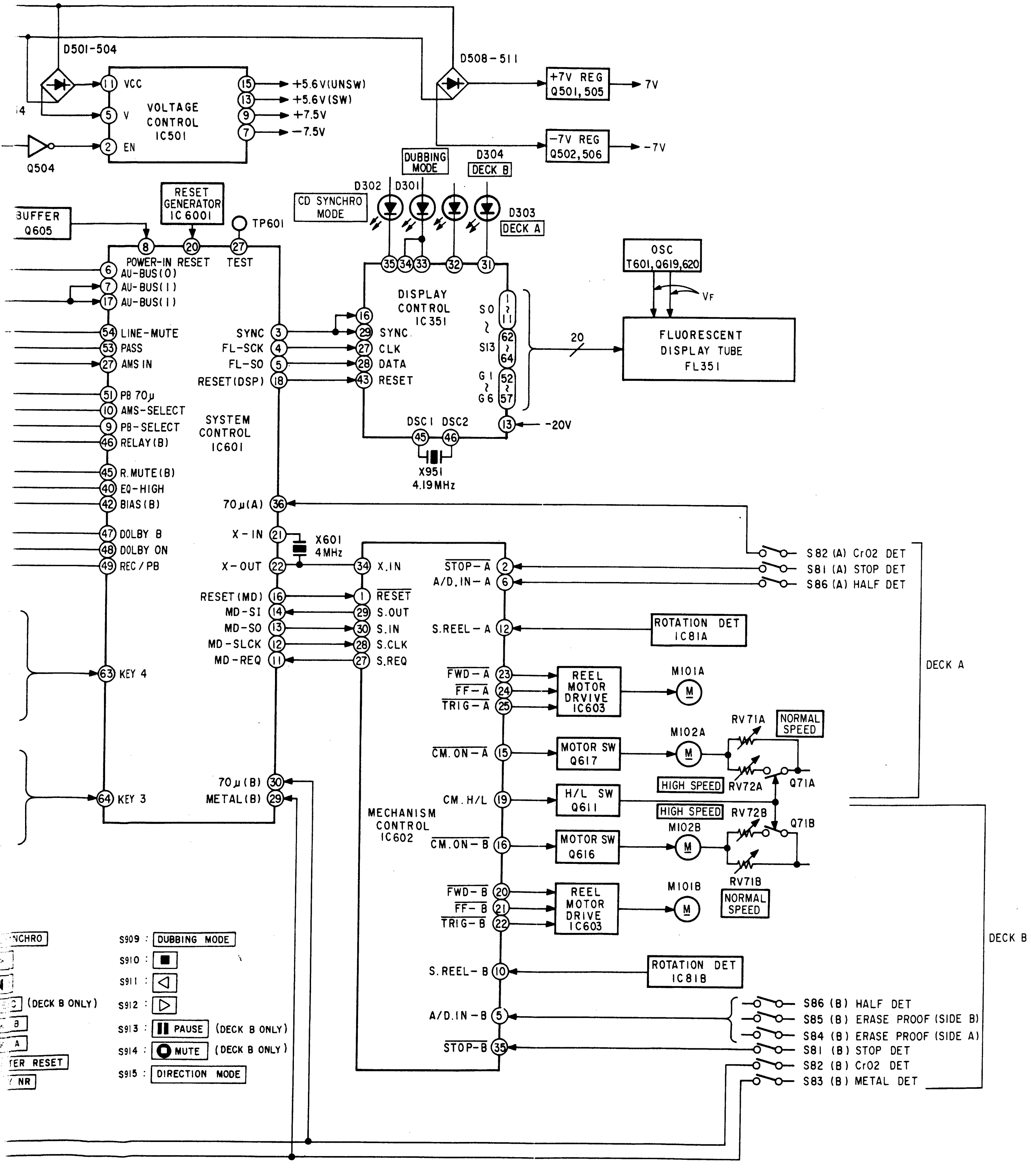
SEL4226C
SEL4226E


anode
cathode

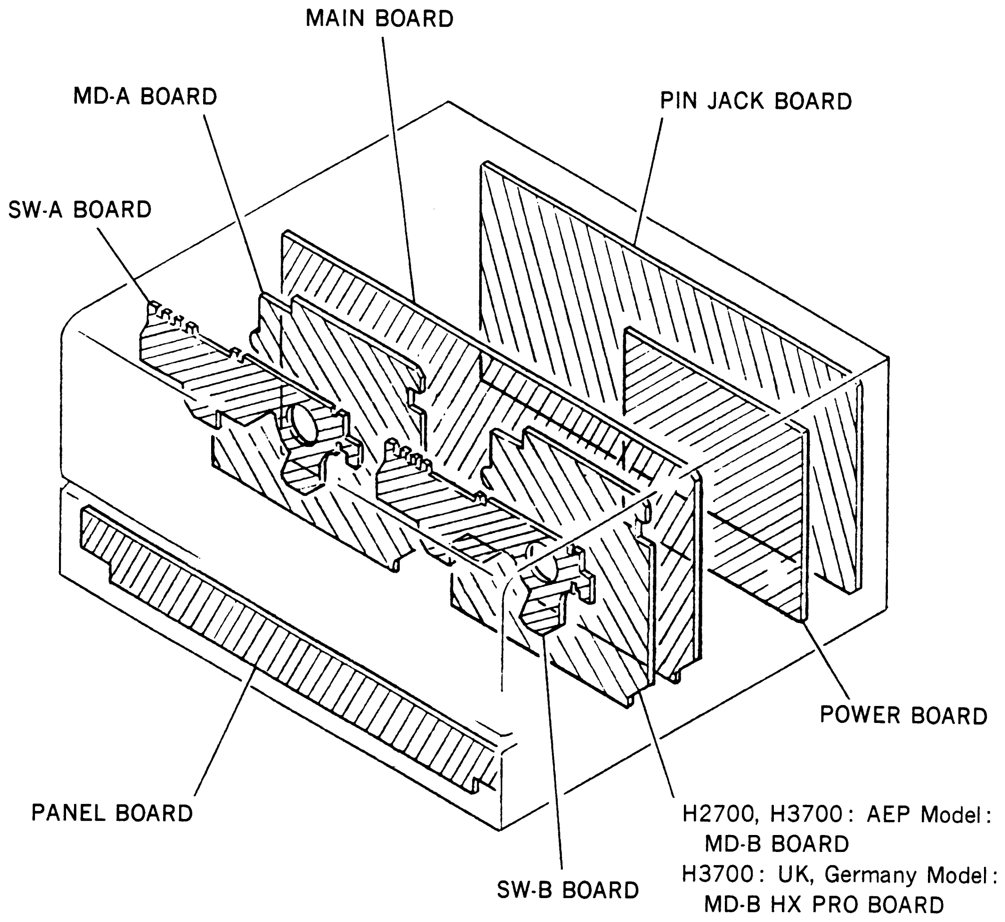
5-3. BLOCK DIAGRAM


DECK A Lch
HP101
(PB HEAD) Rch
Rch
DECK B
HRPE101
-1
Lch
(REC/PB)
-2
Rch
Rch
(REC/PB)
PB EQ AMP IC31A
PB EQ AMP IC31B
RV11A PB LEVEL
RV11B PB LEVEL
RY31
Q607 RELAY SWITCH
IC101
DECK A Rch
DECK B Rch
DECK A/B SELECTOR
A B C
PASS AMP IC104
DOLBY NR AMP
PB IN LINE OUT
IC102
PB EQ SW Q101
Q608 PB CrO2 DRIVER
AMS DET IC604
D602
IC105
Q605 SWITCH
Q604 SWITCH
AMS/MUTE SWITCH
LINE MUTE Q102
SYSTEM CONTROL 2
CD.L
CD.R
ST.L
ST.R
Rch
Rch
IN
VIDEO
DAT
PHONO
J402-1
L
J402-2
R
Rch
J402-5
L
J402-6
R
Rch
J401-3
L
J401-4
R
Rch
PHONO AMP IC401
IC403 FUNCTION SELECTOR
NC
NC
A B C
LINE AMP IC402
SYSTEM CONTROLL 2
AC
AC
Rch
TC FUNC
CD OFF
AUB
L OUT
R OUT
D512
D513
SWITCH Q510
D514
D501-
Q407 SWITCH
+5.6V
RESET Q406
Q504
BUFFER Q503
BUFFER Q605
BUFFER Q609
H3700: UK,G MODEL
OSC T81
HX-PRO IC81
HRPE101 (ERASE)
RV12
REC BIAS
H2700,H3700: AEP MODEL
OSC T51
BIAS OSC Q51,52
BIAS REG Q53
REC EQ IC103
RV101
REC LEVEL
DOLBY SW Q602,603
Q601 REC/PB SELECT SWITCH
IC102
REC OUT LINE IN
DOLBY NR /REC AMP
ALC SWITCH Q606
ALC AMP IC106
SYSTEM CONTROL 2
L.REC
R.REC
Rch
IC605
NORMAL REF V
CrO2 REF V
METAL REF V
A B
TAPE TYPE SELECTOR SWITCH
Q402 VIDEO SWITCH
IC405
VIDEO/DAT SELECTOR
Q401 DAT SWITCH
音声
J402-3
L
J402-4
R
Rch
J401-1
L
J401-2
R
Rch
VIDEO
OUT
DAT
FUNCTION CONTROL IC406
RESET
D4
D5
D6
D7
D8
F0
F1
F2
F3
AUB IN
D0
D1
D2
D3
X1
X0
X401 400KHz
S901
S902
S903
S904
S905
S906
S907
S908
S909
S910
S911
S912
S913
S914
S915
S901 : CD SYNCHRO
S902 : ▶▶
S903 : ◀◀
S904 : ● REC (DECK B ONL
S905 : DECK B
S906 : DECK A
S907 : COUNTER RESET
S908 : DOLBY NR

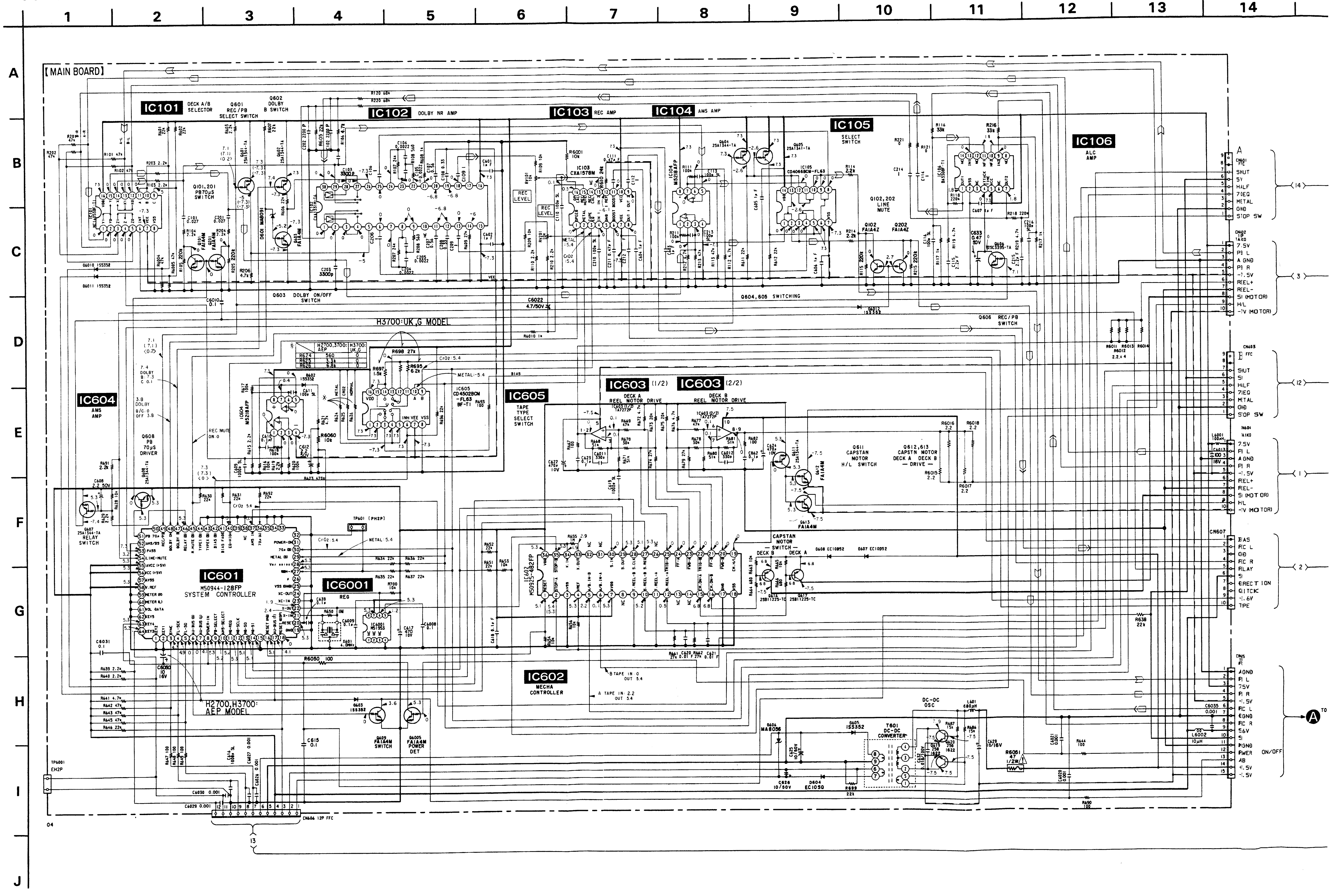
04


D501-504
VCC
V
EN
VOLTAGE CONTROL IC501
+5.6V(UNSW)
+5.6V(SW)
+7.5V
-7.5V
Q504
D508-511
+7V REG Q501,505
7V
-7V REG Q502,506
-7V
DUBBING MODE
D304
DECK B
D302
D301
D303
DECK A
CD SYNCHRO MODE
RESET GENERATOR IC6001
TP601
BUFFER Q605
POWER-IN RESET
TEST
AU-BUS(O)
AU-BUS(I)
AU-BUS(I)
LINE-MUTE
PASS
AMS IN
PB 70μ
AMS-SELECT
PB-SELECT
RELAY(B)
R.MUTE(B)
EQ-HIGH
BIAS(B)
DOLBY B
DOLBY ON
REC/PB
KEY 4
KEY 3
SYNC
FL-SCK
FL-SO
RESET(DSP)
SYSTEM CONTROL IC601
70μ(A)
X-IN
X-OUT
X601 4MHz
RESET(MD)
MD-SI
MD-SO
MD-SLCK
MD-REQ
70μ(B)
METAL(B)
DISPLAY CONTROL IC351
SYNC.
CLK
DATA
RESET
SO
S13
G1
G6
DSC1 DSC2
X951 4.19MHz
-20V
OSC T601,Q619,620
VF
20
FLUORESCENT DISPLAY TUBE FL351
X.IN
RESET
S.OUT
S.IN
S.CLK
S.REQ
MECHANISM CONTROL IC602
STOP-A
A/D.IN-A
S.REEL-A
FWD-A
FF-A
TRIG-A
CM.ON-A
CM.H/L
CM.ON-B
FWD-B
FF-B
TRIG-B
S.REEL-B
A/D.IN-B
STOP-B
S82 (A) CrO2 DET
S81 (A) STOP DET
S86 (A) HALF DET
ROTATION DET IC81A
REEL MOTOR DRVIVE IC603
M101A
MOTOR SW Q617
M102A
RV71A
NORMAL SPEED
HIGH SPEED
RV72A
Q71A
H/L SW Q611
HIGH SPEED
RV72B
M102B
Q71B
MOTOR SW Q616
RV71B
M101B
REEL MOTOR DRIVE IC603
NORMAL SPEED
ROTATION DET IC81B
DECK A
DECK B
S86 (B) HALF DET
S85 (B) ERASE PROOF (SIDE B)
S84 (B) ERASE PROOF (SIDE A)
S81 (B) STOP DET
S82 (B) CrO2 DET
S83 (B) METAL DET
NCHRO
(DECK B ONLY)
TER RESET
NR
S909 : DUBBING MODE
S910 : ■
S911 : ◁
S912 : ▷
S913 : ▌▌ PAUSE (DECK B ONLY)
S914 : ● MUTE (DECK B ONLY)
S915 : DIRECTION MODE

5-4. CIRCUIT BOARDS LOCATION


MAIN BOARD
MD-A BOARD
PIN JACK BOARD
SW-A BOARD
POWER BOARD
PANEL BOARD
SW-B BOARD
H2700, H3700: AEP Model: MD-B BOARD
H3700: UK, Germany Model: MD-B HX PRO BOARD

5-5. SCHEMATIC DIAGRAM —MAIN SECTION— • Refer to page 37 for IC Block Diagrams.


1
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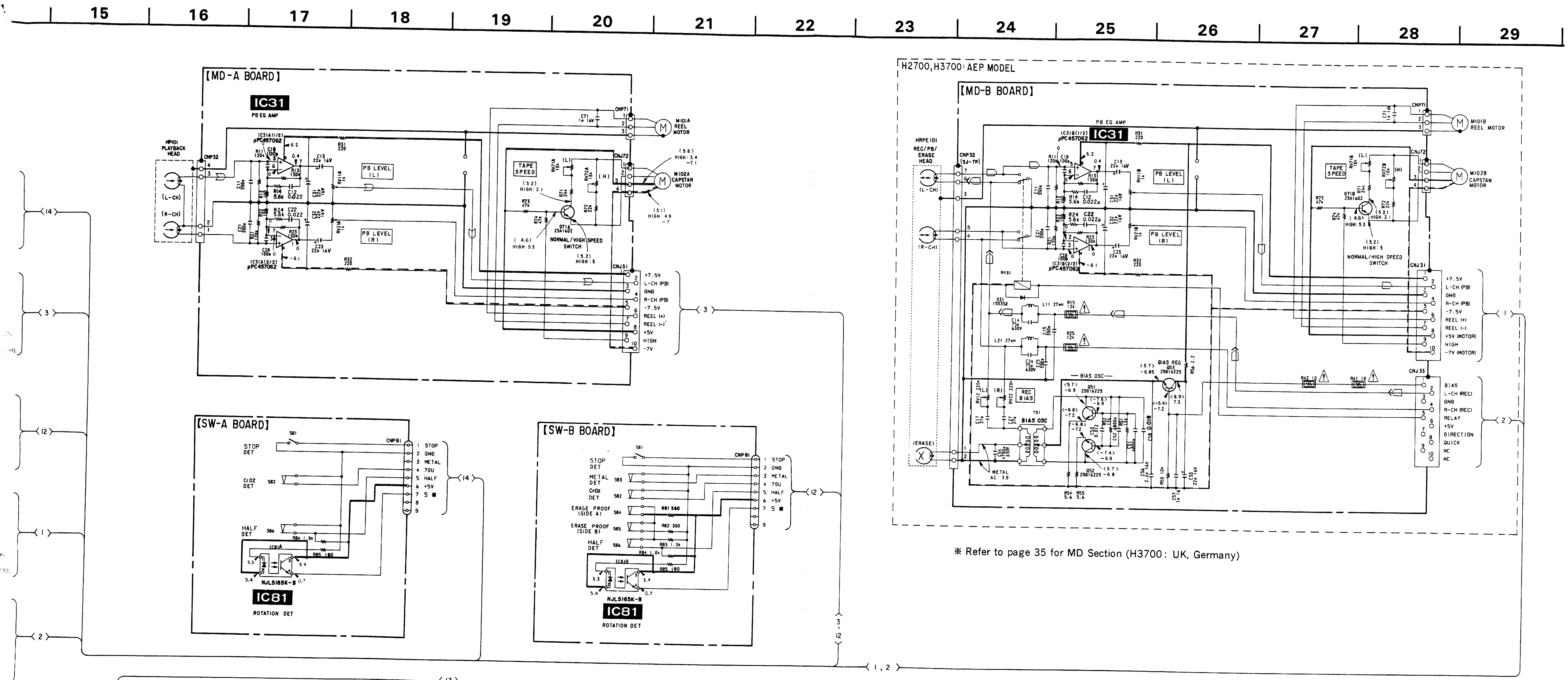
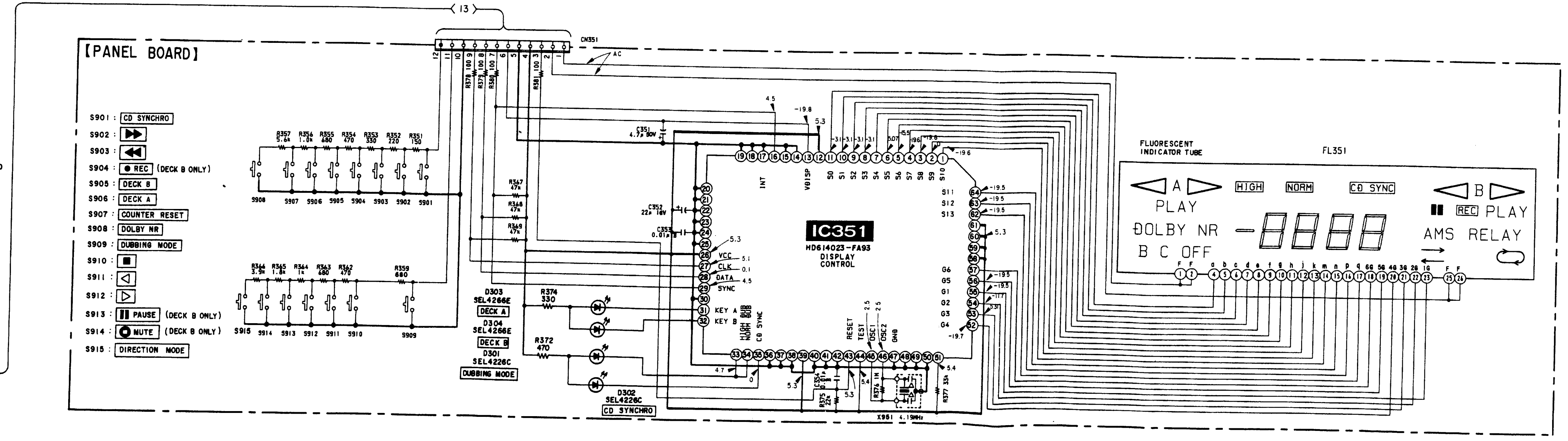
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
[MAIN BOARD]
IC101 DECK A/B SELECTOR
Q601 REC/PB SELECT SWITCH
Q602 DOLBY B SWITCH
IC102 DOLBY NR AMP
IC103 REC AMP
IC104 AMS AMP
IC105 SELECT SWITCH
IC106 ALC AMP
Q101,201 PB70μS SWITCH
Q102,202 LINE MUTE
Q603 DOLBY ON/OFF SWITCH
Q604,605 SWITCHING
Q606 REC/PB SWITCH
H3700:UK,G MODEL
IC604 AMS AMP
IC605 TAPE TYPE SELECT SWITCH
IC603 (1/2) DECK A REEL MOTOR DRIVE
IC603 (2/2) DECK B REEL MOTOR DRIVE
Q611 CAPSTAN MOTOR H/L SWITCH
Q612,613 CAPSTN MOTOR DECK A DECK B — DRIVE —
Q608 PB 70μS DRIVER
Q607 RELAY SWITCH
IC601 M50944-128FP SYSTEM CONTROLLER
IC6001 REG
IC602 M50925-482FP MECHA CONTROLLER
CAPSTAN MOTOR SWITCH DECK B DECK A
H2700,H3700: AEP MODEL
Q609 SWITCH
Q6005 POWER DET
DC-DC OSC
T601 DC-DC CONVERTER
TP6001 EH2P
TP601 (PH2P)
CN6606 12P FFC
(14)
(3)
(12)
(1)
(2)
A TO


15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
[MD-A BOARD]
IC31
PB EQ AMP
IC31A(1/2) µPC457062
IC31A(2/2) µPC457062
HP101 PLAYBACK HEAD
(L-CH)
(R-CH)
CNP32
PB LEVEL (L)
PB LEVEL (R)
TAPE SPEED
NORMAL/HIGH SPEED SWITCH
Q71A 2SA1602
CNP71
CNJ72
CNJ31
M101A REEL MOTOR
M102A CAPSTAN MOTOR
+7.5V
L-CH (PB)
GND
R-CH (PB)
-7.5V
REEL (+)
REEL (-)
+5V
HIGH
-7V
[SW-A BOARD]
STOP DET
CrO2 DET
HALF DET
CNP81
STOP
GND
METAL
70U
HALF
+5V
S ■
IC81
NJL5165K-B
ROTATION DET
[SW-B BOARD]
METAL DET
ERASE PROOF (SIDE A)
ERASE PROOF (SIDE B)
H2700,H3700: AEP MODEL
[MD-B BOARD]
IC31B(1/2) µPC457062
IC31B(2/2) µPC457062
HRPE101 REC/PB/ERASE HEAD
(ERASE)
RY31
BIAS OSC
REC BIAS
BIAS REG
Q51 2SD1622S
Q52 2SD1622S
Q53 2SD1622S
T51
METAL AC: 3.9
M101B REEL MOTOR
M102B CAPSTAN MOTOR
Q71B 2SA1602
CNJ33
BIAS
L-CH (REC)
R-CH (REC)
RELAY
DIRECTION
QUICK
NC
+5V (MOTOR)
-7V (MOTOR)
⟨14⟩
⟨3⟩
⟨12⟩
⟨1⟩
⟨2⟩
⟨1, 2⟩

※ Refer to page 35 for MD Section (H3700: UK, Germany)


⟨13⟩
A TO POWER BOARD CN401
[PANEL BOARD]
CN351
S901 : CD SYNCHRO
S902 : ▶▶
S903 : ◀◀
S904 : ● REC (DECK B ONLY)
S905 : DECK B
S906 : DECK A
S907 : COUNTER RESET
S908 : DOLBY NR
S909 : DUBBING MODE
S910 : ■
S911 : ◁
S912 : ▷
S913 : ▮▮ PAUSE (DECK B ONLY)
S914 : ◯ MUTE (DECK B ONLY)
S915 : DIRECTION MODE
IC351
HD614023-FA93 DISPLAY CONTROL
D303 SEL4266E DECK A
D304 SEL4266E DECK B
D301 SEL4226C DUBBING MODE
D302 SEL4226C CD SYNCHRO
X351 4.19MHz
FLUORESCENT INDICATOR TUBE
FL351
A PLAY
HIGH
NORM
CD SYNC
B
REC PLAY
DOLBY NR
AMS RELAY
B C OFF

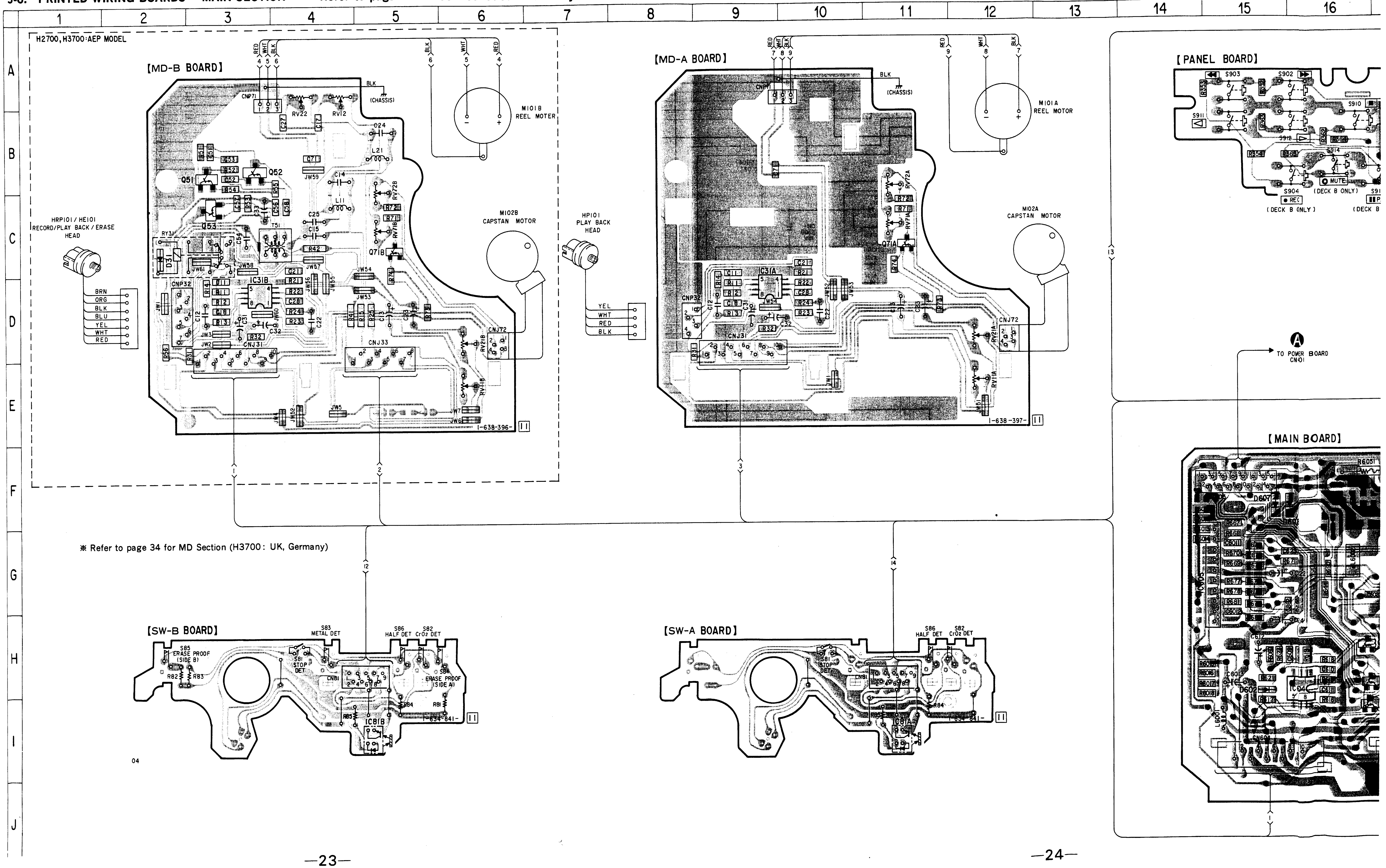
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line
- ▬ ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PB
  < > : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊳ : PB (DECK A) ⊳» : REC (DECK B)
  ⊳» : REC (DECK A)
- G: Germany model

5-6. PRINTED WIRING BOARDS —MAIN SECTION— • Refer to page 14 for Semiconductor Lead Layouts.


1
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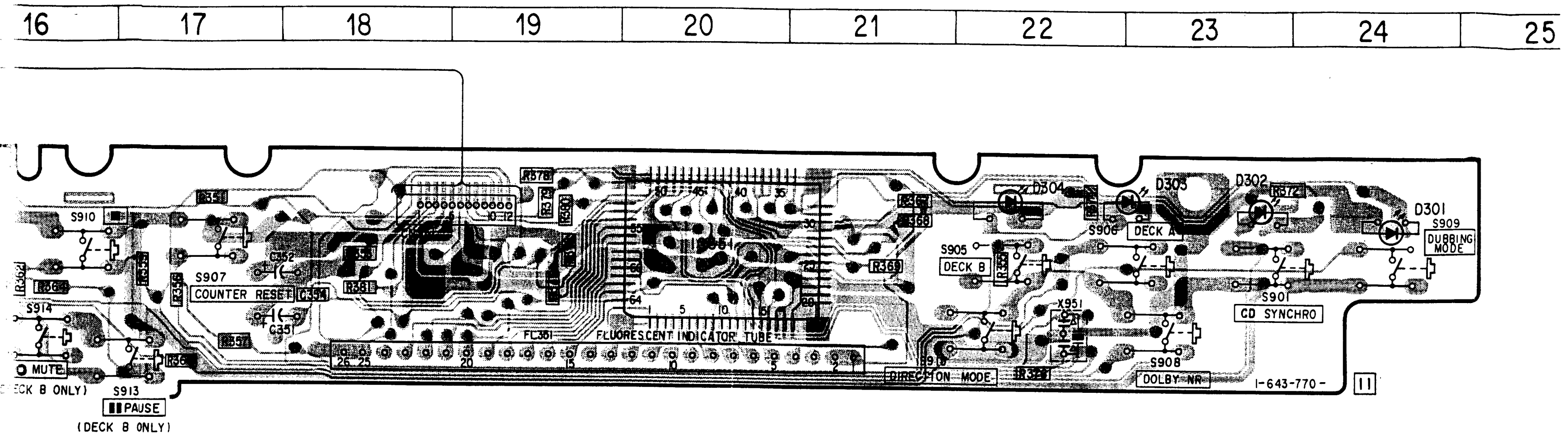
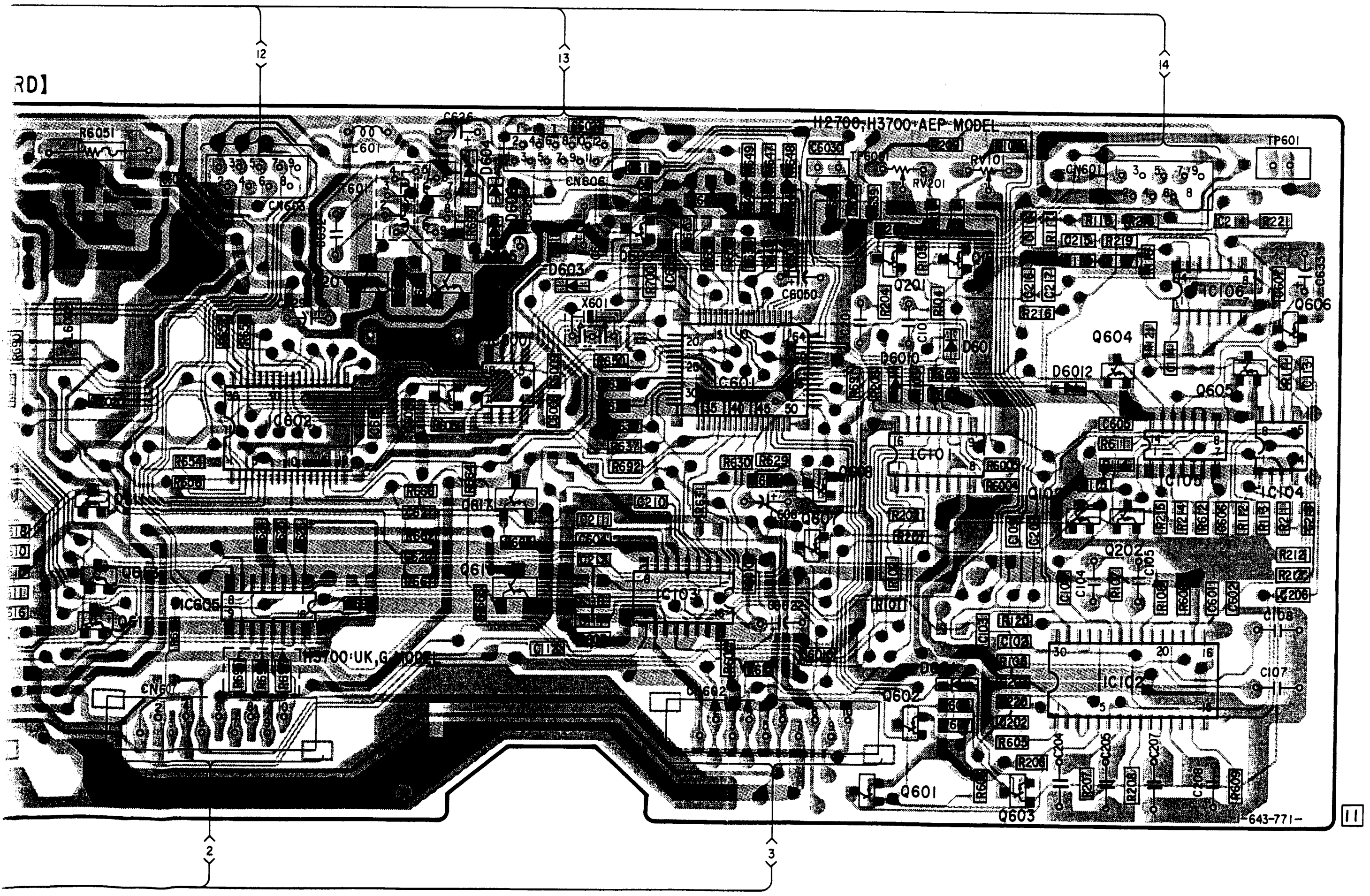
15
16
A
B
C
D
E
F
G
H
I
J
H2700, H3700:AEP MODEL
[MD-B BOARD]
RED
WHT
BLK
BLK
(CHASSIS)
M101B
REEL MOTER
HRP101 / HE101
RECORD/PLAY BACK / ERASE
HEAD
BRN
ORG
BLK
BLU
YEL
WHT
RED
M102B
CAPSTAN MOTOR
CNP71
CNP32
CNJ31
CNJ33
CNJ72
IC31B
Q51
Q52
Q53
Q71B
T51
RY31
D31
L11
L21
RV12
RV22
RV71B
RV72B
RV21B
RV11B
1-638-396-
11
[MD-A BOARD]
M101A
REEL MOTOR
HP101
PLAY BACK
HEAD
YEL
WHT
RED
BLK
M102A
CAPSTAN MOTOR
IC31A
Q71A
RV71A
RV72A
RV21A
RV11A
1-638-397-
11
[PANEL BOARD]
S903
S902
S910
S911
S912
S914
S904
● REC
MUTE
(DECK B ONLY)
(DECK B ONLY)
A
TO POWER BOARD
CN101
[MAIN BOARD]
[SW-B BOARD]
S85
ERASE PROOF
(SIDE B)
S83
METAL DET
S81
STOP
DET
S86
HALF DET
S82
CrO2 DET
S84
ERASE PROOF
(SIDE A)
CN81
IC81B
R82
R83
R84
R85
R81
1-654-841-
11
[SW-A BOARD]
S86
HALF DET
S82
CrO2 DET
S81
STOP
DET
CN81
IC81A
1-654-841-
11
1
2
3
12
13
14
04

※ Refer to page 34 for MD Section (H3700: UK, Germany)


16
17
18
19
20
21
22
23
24
25
S910
S907
COUNTER RESET
C352
C351
S914
MUTE
:CK B ONLY)
S913
❚❚PAUSE
(DECK B ONLY)
FL351
FLUORESCENT INDICATOR TUBE
IC351
S905
DECK B
S906
DECK A
D304
D303
D302
D301
S909
DUBBING MODE
S901
CD SYNCHRO
X951
S908
DOLBY NR
DIRECTION MODE
1-643-770-
11


12
13
14
RD]
H2700,H3700:AEP MODEL
TP601
CN601
RV201
CN606
Q201
Q604
Q606
D6012
Q605
IC106
IC104
IC102
Q202
D603
X601
IC601
IC602
D6010
H3700:UK,G MODEL
Q602
Q601
Q603
1-643-771-
11
2
3

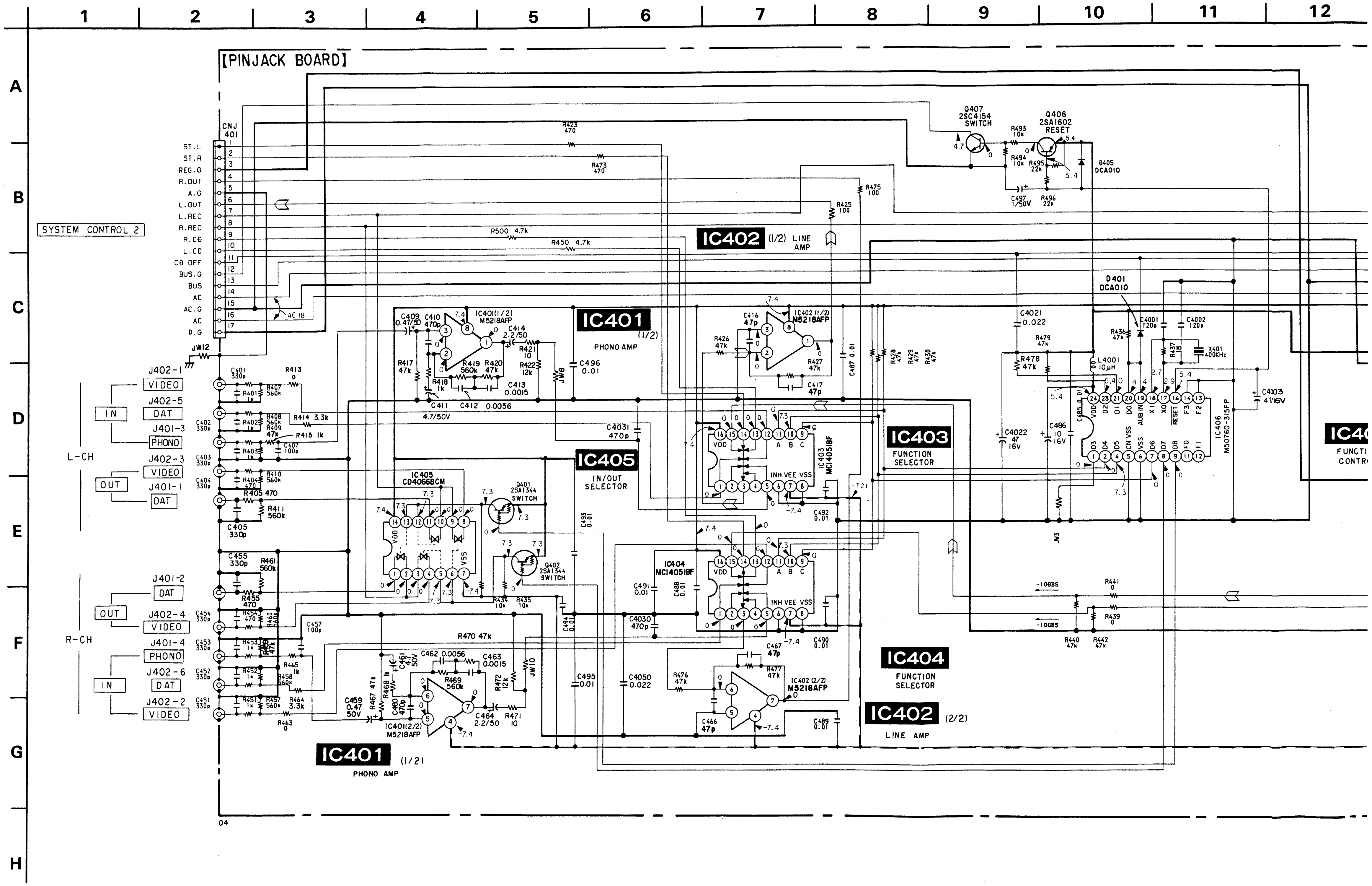
● Semiconductor Location

Ref. No.	Location
D31	C-2
D301	B-24
D302	A-23
D303	A-22
D304	A-22
D601	I-21
D602	I-15
D603	G-19
D604	F-19
D605	F-19
D606	F-19
D607	F-15
D608	F-15
D6010	G-21
D6011	G-21
D6012	G-22
IC31A	D-9
IC31B	D-3
IC81A	I-11
IC81B	I-5
IC101	H-21
IC102	I-22
IC103	I-20
IC104	H-23
IC105	H-23
IC106	G-23
IC351	B-20
IC601	G-20
IC602	H-17
IC603	G-15
IC604	I-16
IC605	I-17
IC6001	G-19
Q51	B-3
Q52	B-3
Q53	C-3
Q71A	C-11
Q71B	C-5
Q101	G-21
Q102	H-22
Q201	G-21
Q202	H-22
Q601	J-21
Q602	I-21
Q603	J-22
Q604	G-22
Q605	G-23
Q606	G-23
Q607	H-21
Q608	H-21
Q609	F-20
Q611	H-16
Q612	I-16
Q613	H-16
Q616	H-19
Q617	H-19
Q619	G-18
Q620	G-18
Q6005	G-18

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.
- G : Germany model

5-7. SCHEMATIC DIAGRAM —PIN JACK SECTION— • Refer to page 37 for IC Block Diagrams.

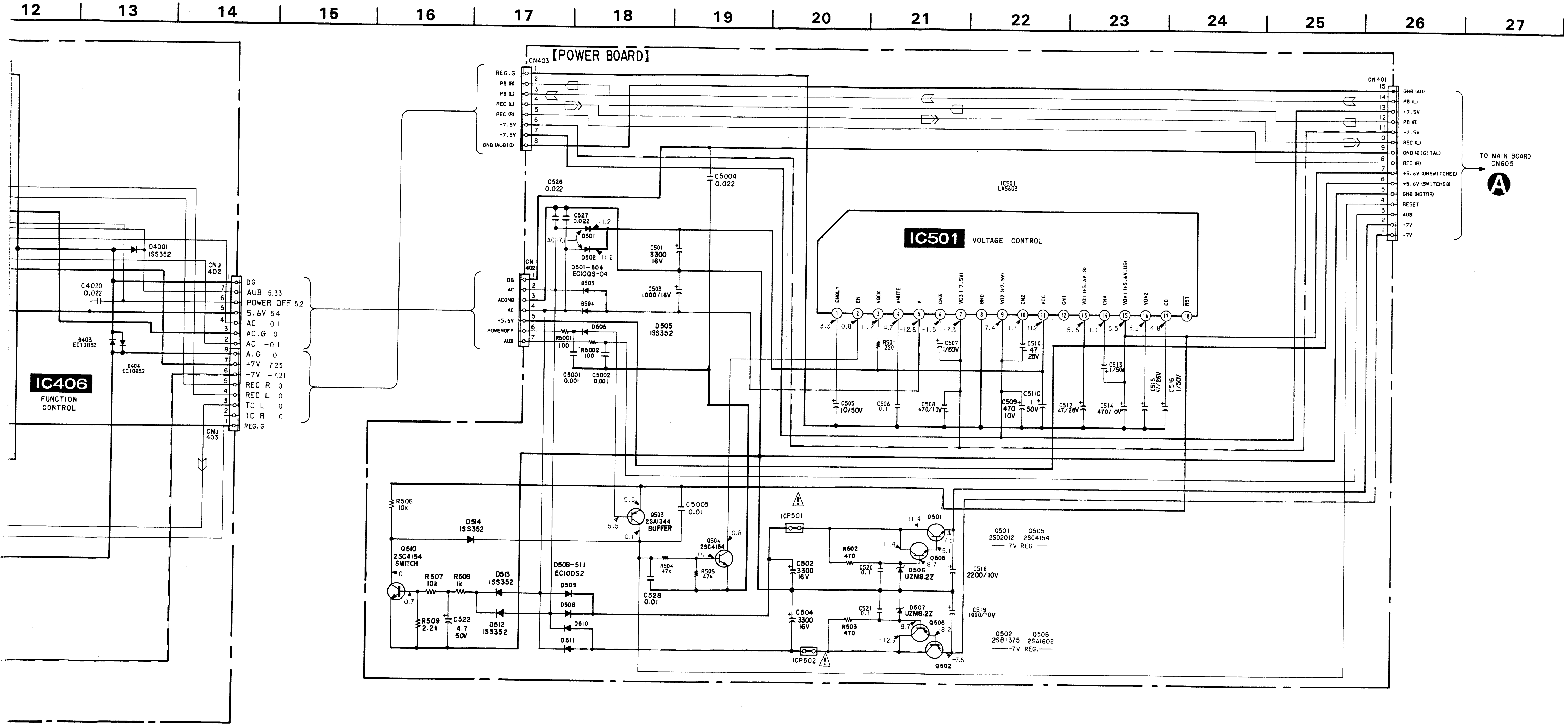

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
[PINJACK BOARD]
SYSTEM CONTROL 2
CNJ 401
ST.L
ST.R
REG.G
R.OUT
A.G
L.OUT
L.REC
R.REC
R.CD
L.CD
CD OFF
BUS.G
BUS
AC
AC.G
AC
D.G
JW12
J402-1 VIDEO
J402-5 DAT
J401-3 PHONO
J402-3 VIDEO
J401-1 DAT
IN
OUT
L-CH
J401-2 DAT
J402-4 VIDEO
J401-4 PHONO
J402-6 DAT
J402-2 VIDEO
R-CH
IC401 (1/2) PHONO AMP
IC401(1/2) M5218AFP
IC401(2/2) M5218AFP
IC402 (1/2) LINE AMP
IC402 (1/2) M5218AFP
IC402 (2/2) M5218AFP
IC402 (2/2) LINE AMP
IC403 FUNCTION SELECTOR
IC403 MC14051BF
IC404 FUNCTION SELECTOR
IC404 MC14051BF
IC405 IN/OUT SELECTOR
IC405 CD4066BCM
IC406 M50760-315FP
Q401 2SA1344 SWITCH
Q402 2SA1344 SWITCH
Q406 2SA1602 RESET
Q407 2SC4154 SWITCH
D401 DCA010
D405 DCA010
X401 400KHz
L4001 10μH
R500 4.7k
R450 4.7k
R470 47k
FUNCTI CONTR

Note:

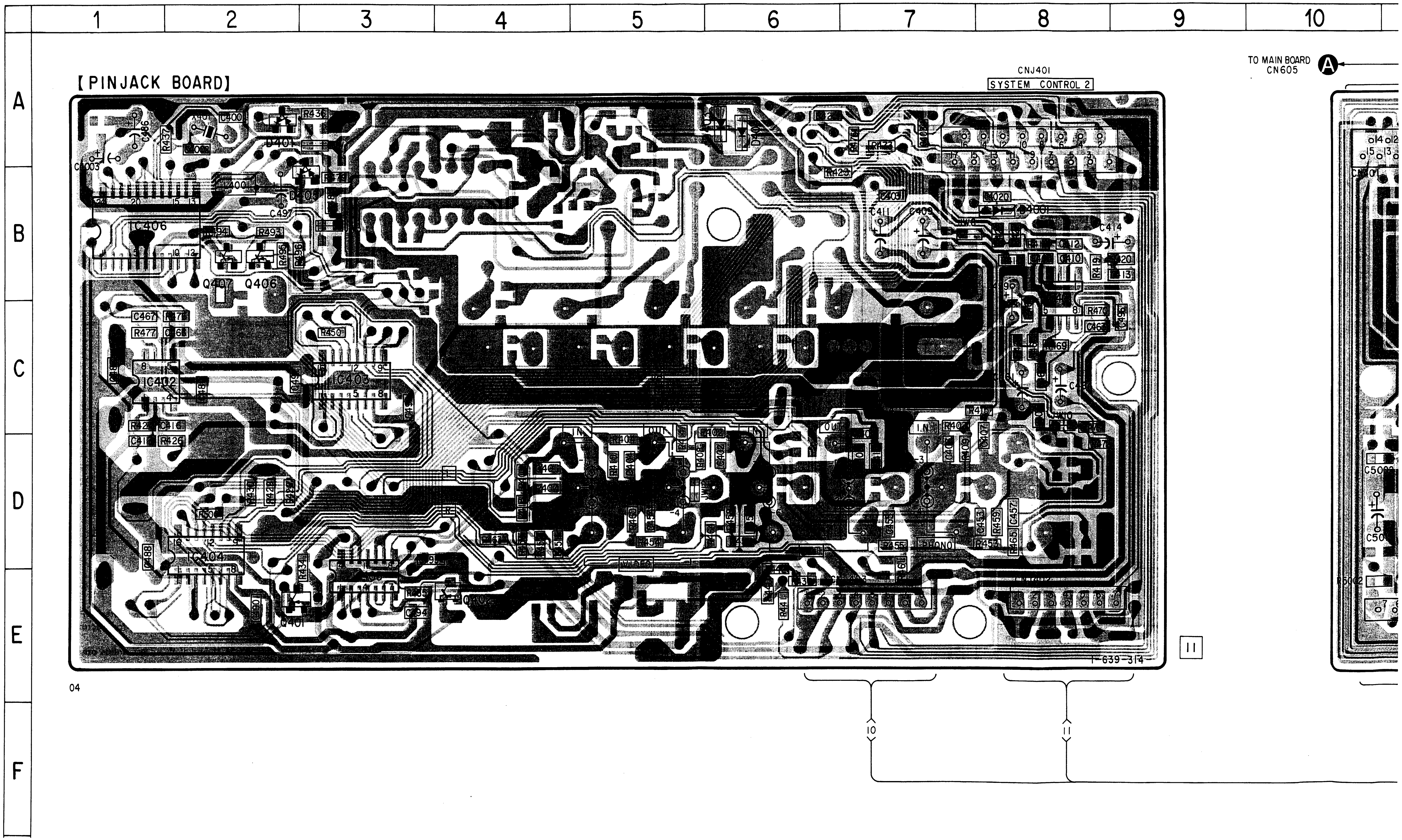
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

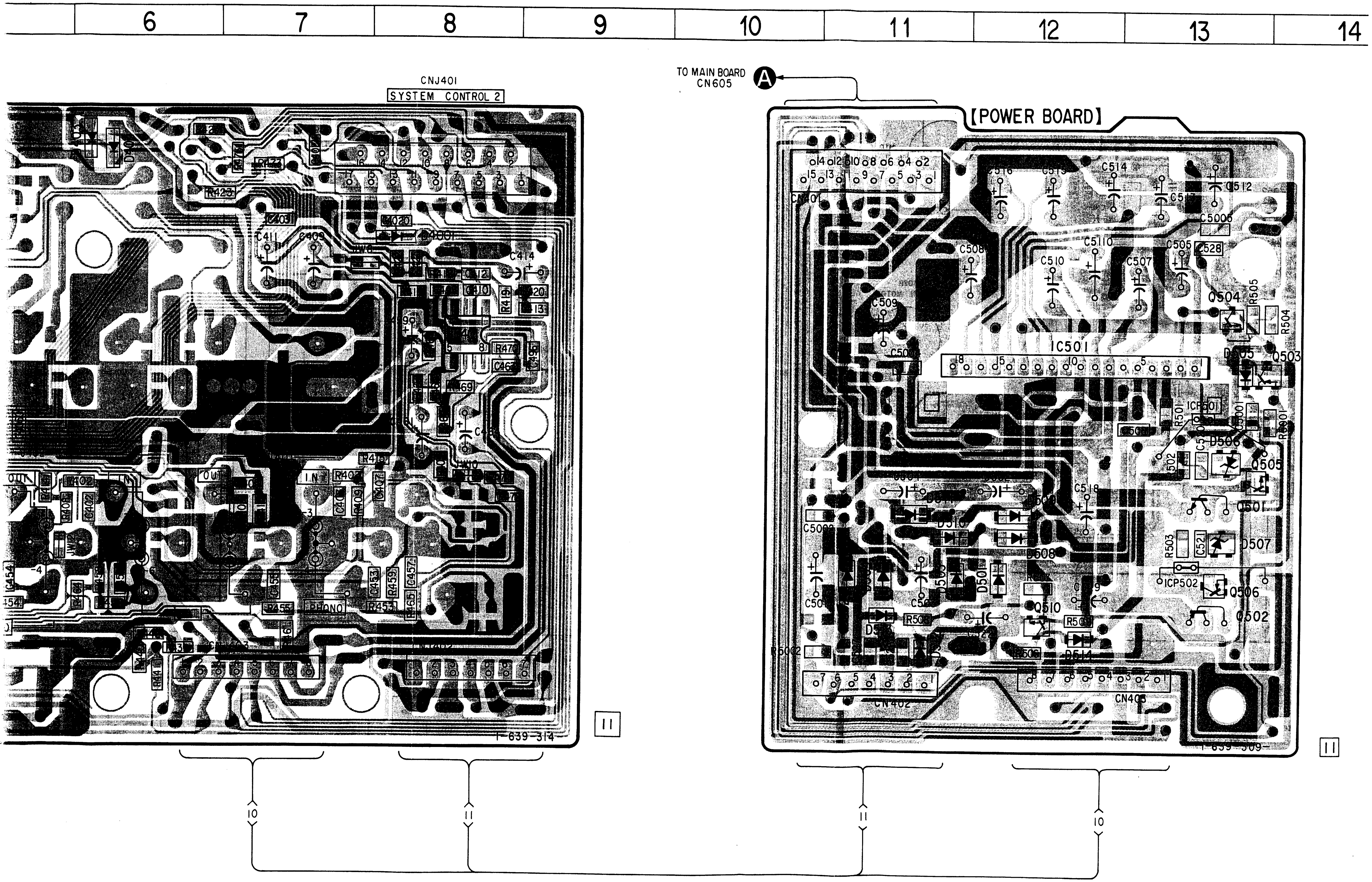
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line
- ▬ ▬ ▬ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
  ( ): PB
  < >: REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊳ : PB (DECK A)
  ⊳⟩ : REC (DECK A)
  ▭⟩ : REC (DECK B)


12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
IC406
FUNCTION CONTROL
D4001
ISS352
C4020
0.022
D403
EC10DS2
D404
EC10DS2
CNJ 402
CNJ 403
1 DG
7 AUB 5.33
6 POWER OFF 5.2
5 5.6V 5.4
4 AC -0.1
3 AC.G 0
2 AC -0.1
8 A.G 0
7 +7V 7.25
6 -7V -7.21
5 REC R 0
4 REC L 0
3 TC L 0
2 TC R 0
1 REG.G
[POWER BOARD]
CN403
1 REG.G
2 PB (R)
3 PB (L)
4 REC (L)
5 REC (R)
6 -7.5V
7 +7.5V
8 GND (AUDIO)
CN 402
1 DG
2 AC
3 ACGND
4 AC
5 +5.6V
6 POWEROFF
7 AUB
C526
0.022
C527
0.022
11.2
AC 17.1
D501
D502
11.2
D501-504
EC10QS-04
D503
D504
D505
R5001
100
R5002
100
C5001
0.001
C5002
0.001
C501
3300
16V
C503
1000/16V
D505
ISS352
C5004
0.022
IC501
LA5603
IC501 VOLTAGE CONTROL
1 ENDLY 3.3
2 EN 0.8
3 VQCK 11.2
4 VMUTE 4.7
5 V -12.6
6 CN3 -1.5
7 VO3 (-7.5V) -7.3
8 GND
9 VO2 (+7.5V) 7.4
10 CN2 1.1
11 VCC 11.2
12 CN1
13 VO1 (+5.5V.S) 5.5
14 CNA 1.1
15 VOA1 (+5.6V.US) 5.5
16 VOA2 5.2
17 CD 4.8
18 RST
R501
220
C507
1/50V
C510
47
25V
C513
1/50V
C505
10/50V
C506
0.1
C508
470/10V
C509
470
10V
C5110
1
50V
C512
47/25V
C514
470/10V
C515
47/25V
C516
1/50V
CN401
15 GND (AU)
14 PB (L)
13 +7.5V
12 PB (R)
11 -7.5V
10 REC (L)
9 GND (DIGITAL)
8 REC (R)
7 +5.6V (UNSWITCHED)
6 +5.6V (SWITCHED)
5 GND (MOTOR)
4 RESET
3 AUB
2 +7V
1 -7V
TO MAIN BOARD
CN605
A
R506
10k
D514
ISS352
Q510
2SC4154
SWITCH
0
0.7
R507
10k
R508
1k
D513
ISS352
R509
2.2k
C522
4.7
50V
D512
ISS352
D508-511
EC10DS2
D509
D508
D510
D511
5.5
5.5
0.1
Q503
2SA1344
BUFFER
C5005
0.01
0.8
Q504
2SC4154
0.1
R504
47k
R505
47k
C528
0.01
ICP501
C502
3300
16V
C504
3300
16V
ICP502
R502
470
C520
0.1
D506
UZM8.2Z
C521
0.1
D507
UZM8.2Z
R503
470
11.4
Q501
11.4
7.5
8.1
Q505
8.7
-8.7
Q506
-8.2
-12.3
-7.6
Q502
C518
2200/10V
C519
1000/10V
Q501 Q505
2SD2012 2SC4154
7V REG.
Q502 Q506
2SB1375 2SA1602
-7V REG.

5-8. PRINTED WIRING BOARDS —PIN JACK SECTION— • Refer to page 14 for Semiconducter Lead Layouts.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
[PINJACK BOARD]
CNJ401
SYSTEM CONTROL 2
TO MAIN BOARD CN605
A
C486
R437
X401
C400
C4003
R436
D401
C497
C4001
D404
IC406
R493
R494
R496
Q407
Q406
C467
R478
R477
C468
R450
IC402
IC403
R427
C416
C418
R426
IC404
R488
R434
Q401
C494
R423
R424
R425
C403
C411
C409
C4020
D4001
C414
Q412
Q410
R470
C462
R469
R415
R407
IN
OUT
R408
R405
VIDEO
PHONO
R455
R459
C457
C453
R463
R44
R5002
C5003
C501
IC401
1-639-314
11
04
10


6
7
8
9
10
11
12
13
14
CNJ401
SYSTEM CONTROL 2
TO MAIN BOARD
CN605
A
[POWER BOARD]
CN401
CN402
CN403
IC501
1-639-314
1-639-309
11
10
11
11
10

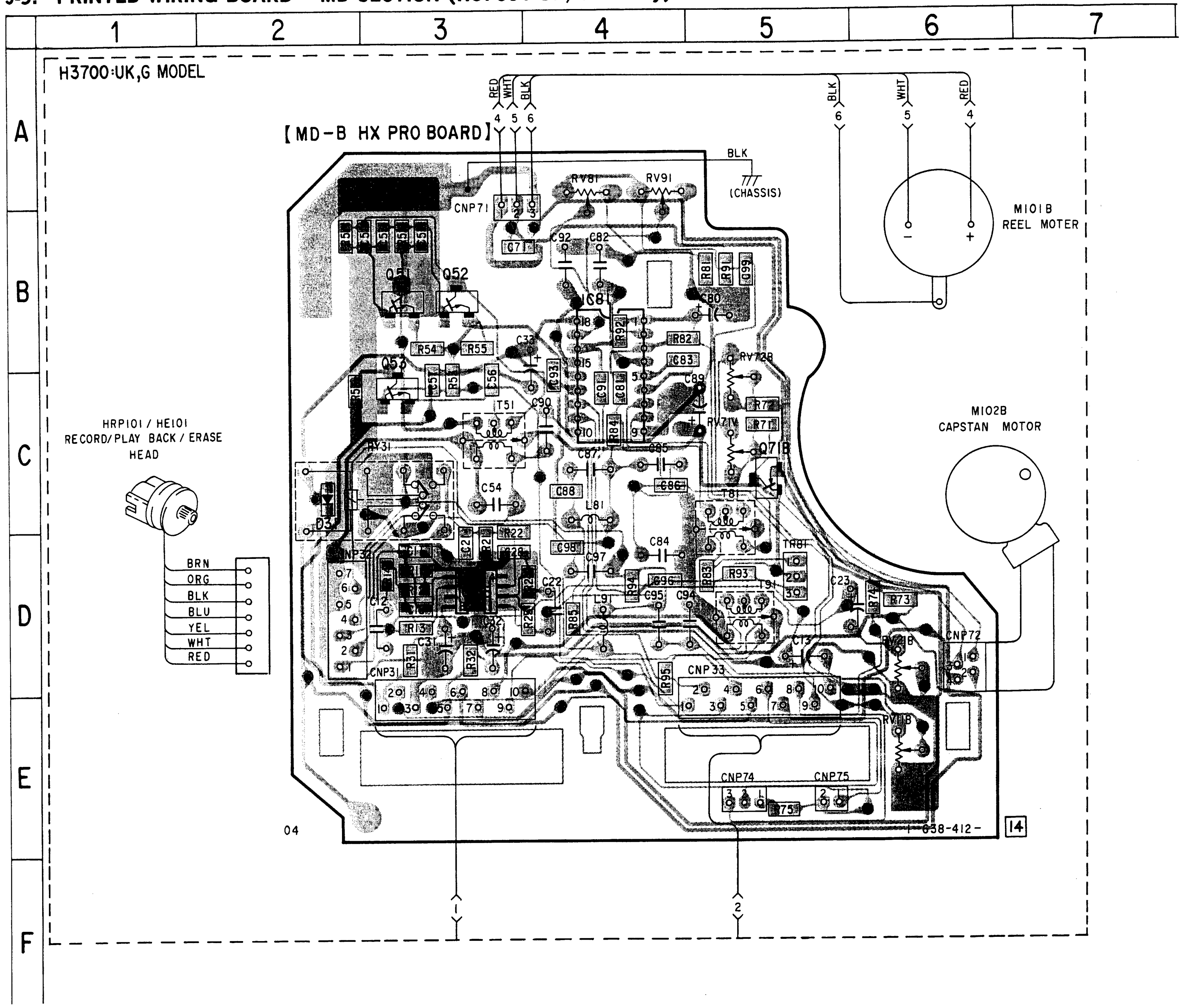
• Semiconductor Location

Ref. No.	Location
D401	A-2
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-11
D503	D-11
D504	D-11
D505	C-13
D506	C-13
D507	D-13
D508	D-12
D509	D-12
D510	D-11
D511	D-11
D512	E-11
D513	D-11
D514	E-12
D4001	B-8
IC401	B-8
IC402	C-1
IC403	C-3
IC404	D-2
IC405	E-3
IC406	B-1
IC501	C-12
Q401	E-2
Q402	E-4
Q406	B-2
Q407	B-2
Q501	D-13
Q502	D-13
Q503	C-13
Q504	B-13
Q505	C-13
Q506	D-13
Q510	D-12

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

5-9. PRINTED WIRING BOARD —MD SECTION (H3700: UK, Germany)—


H3700:UK,G MODEL
[MD-B HX PRO BOARD]
RED
WHT
BLK
BLK
(CHASSIS)
M101B
REEL MOTER
M102B
CAPSTAN MOTOR
HRP101 / HE101
RECORD/PLAY BACK / ERASE
HEAD
BRN
ORG
BLK
BLU
YEL
WHT
RED
CNP71
RV81
RV91
Q51
Q52
Q53
T51
RY31
D31
CNP32
CNP31
IC31
C54
L81
L91
T81
T91
IC81
Q71B
RV72B
RV71B
CNP33
CNP72
CNP74
CNP75
RV11B
RV21B
04
1-638-412-
14

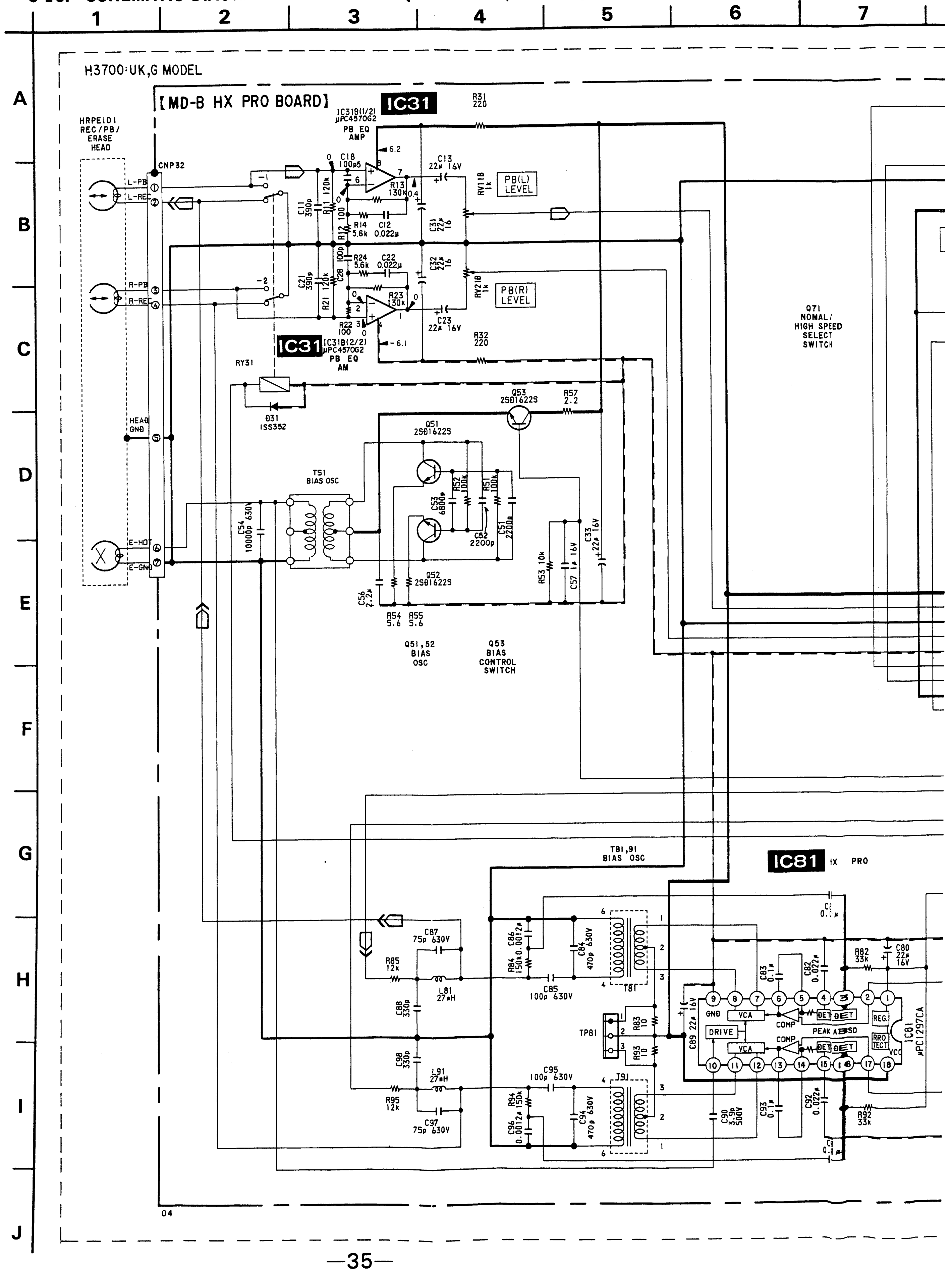
• Semiconductor Location

Ref. No.	Location
D31	C-2
IC31B	D-3
IC81	B-4
Q51	B-3
Q52	B-3
Q53	C-3
Q71B	C-5

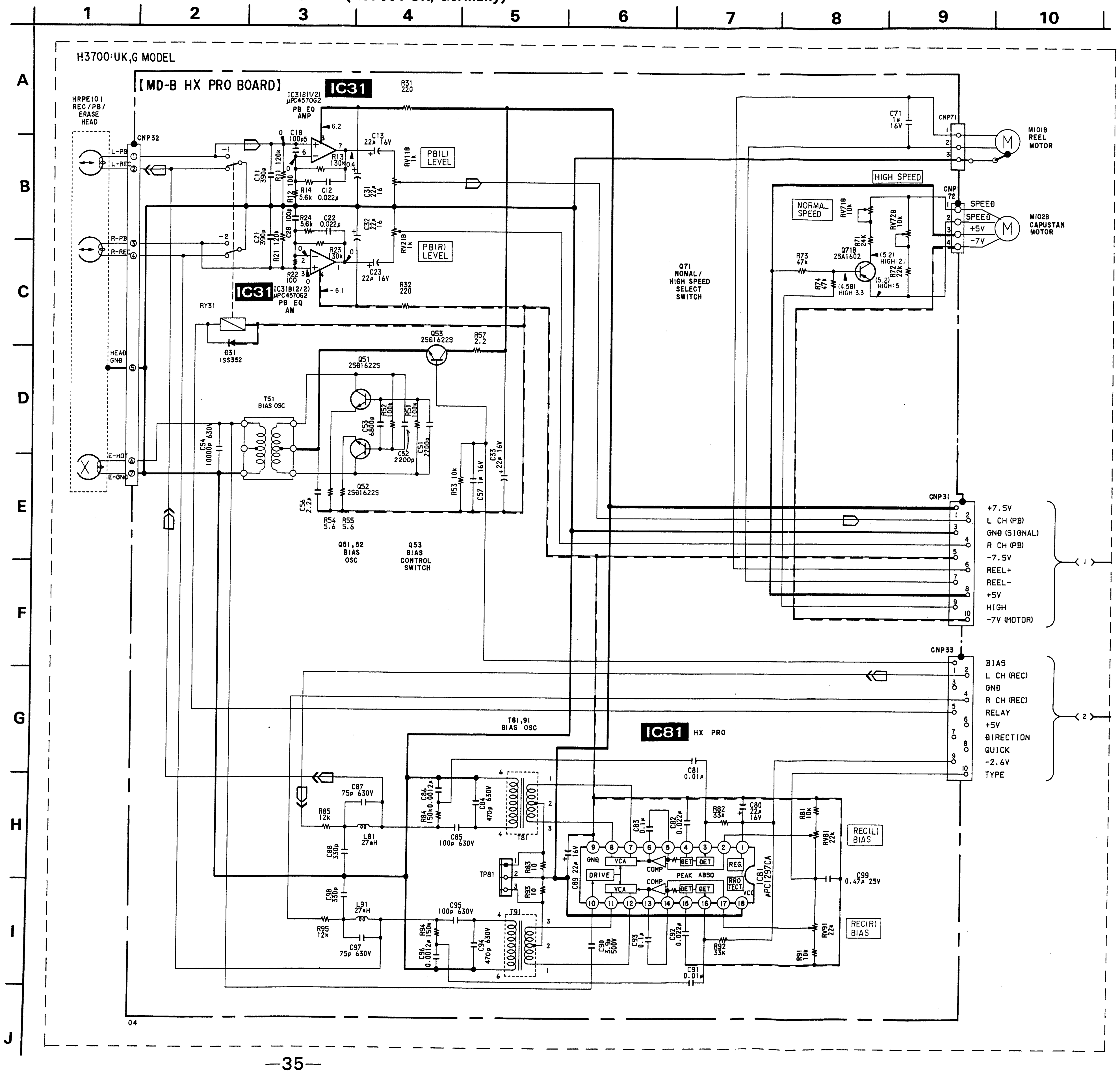
Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.
- G: Germany model

5-10. SCHEMATIC DIAGRAM —MD SECTION (H3700: UK, Germany)—


H3700:UK,G MODEL
[MD-B HX PRO BOARD]
IC31
IC31B(1/2) µPC4570G2 PB EQ AMP
IC31B(2/2) µPC4570G2 PB EQ AMP
HRPE101 REC/PB/ERASE HEAD
CNP32
L-PB
L-REC
R-PB
R-REC
HEAD GND
E-HOT
E-GND
PB(L) LEVEL
PB(R) LEVEL
RV11B 1k
RV21B 1k
R31 220
R32 220
RY31
D31 1SS352
Q53 2SD1622S
Q51 2SD1622S
Q52 2SD1622S
T51 BIAS OSC
Q51,52 BIAS OSC
Q53 BIAS CONTROL SWITCH
Q71 NOMAL/HIGH SPEED SELECT SWITCH
T81,91 BIAS OSC
IC81
IC81 µPC1297CA
TP81
GND
DRIVE
VCA
COMP
PEAK ABSO
DET
REG.
PROTECT
VCC
04

5-10. SCHEMATIC DIAGRAM —MD SECTION (H3700: UK, Germany)—

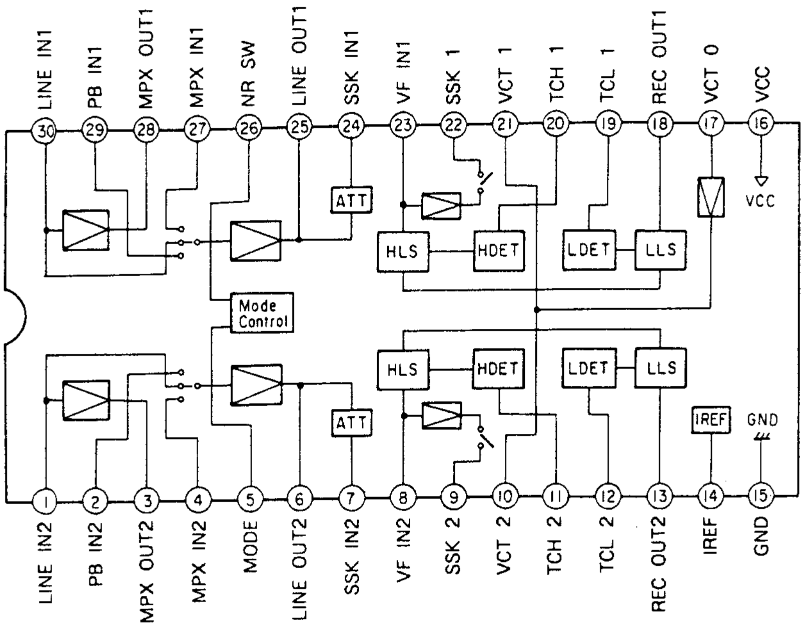

1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
H3700:UK,G MODEL
[MD-B HX PRO BOARD]
IC31
IC31B(1/2) μPC4570G2 PB EQ AMP
HRPE101 REC/PB/ERASE HEAD
CNP32
L-PB
L-REC
R-PB
R-REC
HEAD GND
E-HOT
E-GND
IC31B(2/2) μPC4570G2 PB EQ AMP
RY31
D31 1SS352
T51 BIAS OSC
Q51 2SD1622S
Q52 2SD1622S
Q53 2SD1622S
Q51,52 BIAS OSC
Q53 BIAS CONTROL SWITCH
PB(L) LEVEL
PB(R) LEVEL
RV11B 1k
RV21B 1k
Q71 NONAL/HIGH SPEED SELECT SWITCH
HIGH SPEED
NORMAL SPEED
Q71B 2SA1602
RV71B 10k
RV72B 10k
CNP71
CNP72
M101B REEL MOTOR
M102B CAPUSTAN MOTOR
SPEED
+5V
-7V
CNP31
+7.5V
L CH (PB)
GND (SIGNAL)
R CH (PB)
-7.5V
REEL+
REEL-
+5V
HIGH
-7V (MOTOR)
(1)
CNP33
BIAS
L CH (REC)
GND
R CH (REC)
RELAY
+5V
DIRECTION
QUICK
-2.6V
TYPE
(2)
T81,91 BIAS OSC
IC81 HX PRO
IC81 μPC1297CA
VCA
DRIVE
COMP
DET
PEAK ABSO
REG
RRO TECT
TP81
REC(L) BIAS
REC(R) BIAS
RV81 22k
RV91 22k
L81 27mH
L91 27mH
T81
T91
04

Note:

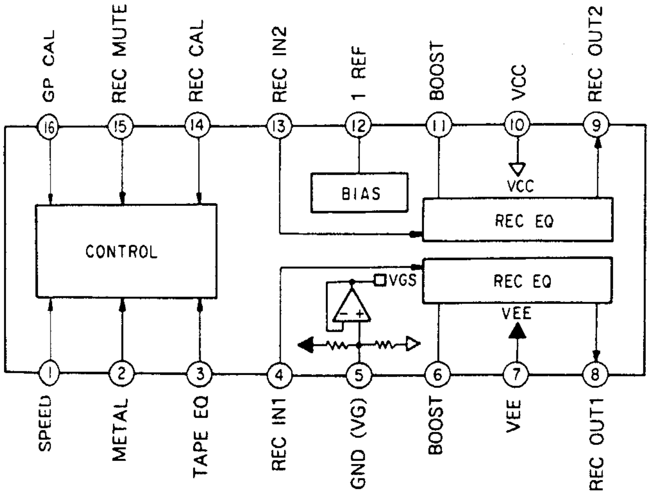
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- ▬ : B+ Line
- ▬ ▬ : B– Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : PB (DECK B)
  ▷▷ : REC (DECK B)
- G: Germany model

• IC Block Diagrams

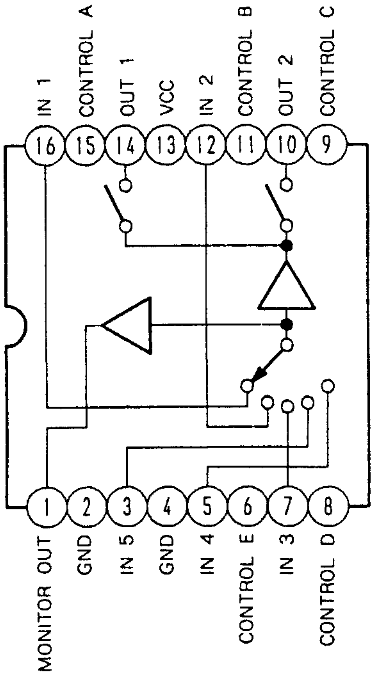
IC102 CXA1331M


LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK 1
VCT 1
TCH 1
TCL 1
REC OUT1
VCT 0
VCC
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ATT
VCC
HLS
HDET
LDET
LLS
Mode Control
HLS
HDET
LDET
LLS
ATT
IREF
GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK 2
VCT 2
TCH 2
TCL 2
REC OUT2
IREF
GND

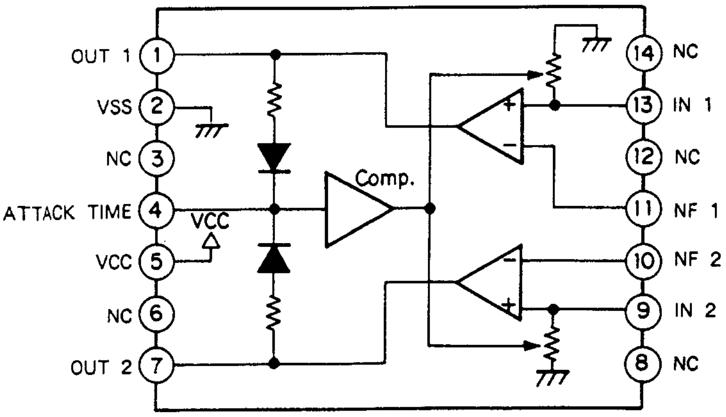
IC103 CXA1578M


GP CAL
REC MUTE
REC CAL
REC IN2
1 REF
BOOST
VCC
REC OUT2
16
15
14
13
12
11
10
9
BIAS
VCC
CONTROL
REC EQ
VGS
REC EQ
VEE
1
2
3
4
5
6
7
8
SPEED
METAL
TAPE EQ
REC IN1
GND (VG)
BOOST
VEE
REC OUT1

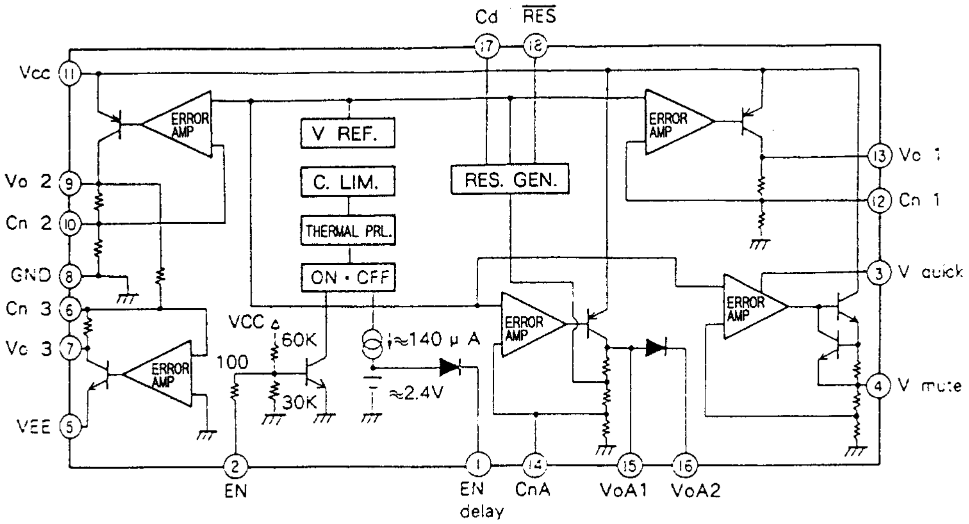
IC407 BA7625


IN 1
CONTROL A
OUT 1
VCC
IN 2
CONTROL B
OUT 2
CONTROL C
16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8
MONITOR OUT
GND
IN 5
GND
IN 4
CONTROL E
IN 3
CONTROL D

IC106 BA3308F


OUT 1
VSS
NC
ATTACK TIME
VCC
NC
OUT 2
1
2
3
4
5
6
7
VCC
Comp.
14
13
12
11
10
9
8
NC
IN 1
NC
NF 1
NF 2
IN 2
NC

IC501 LA5603-S

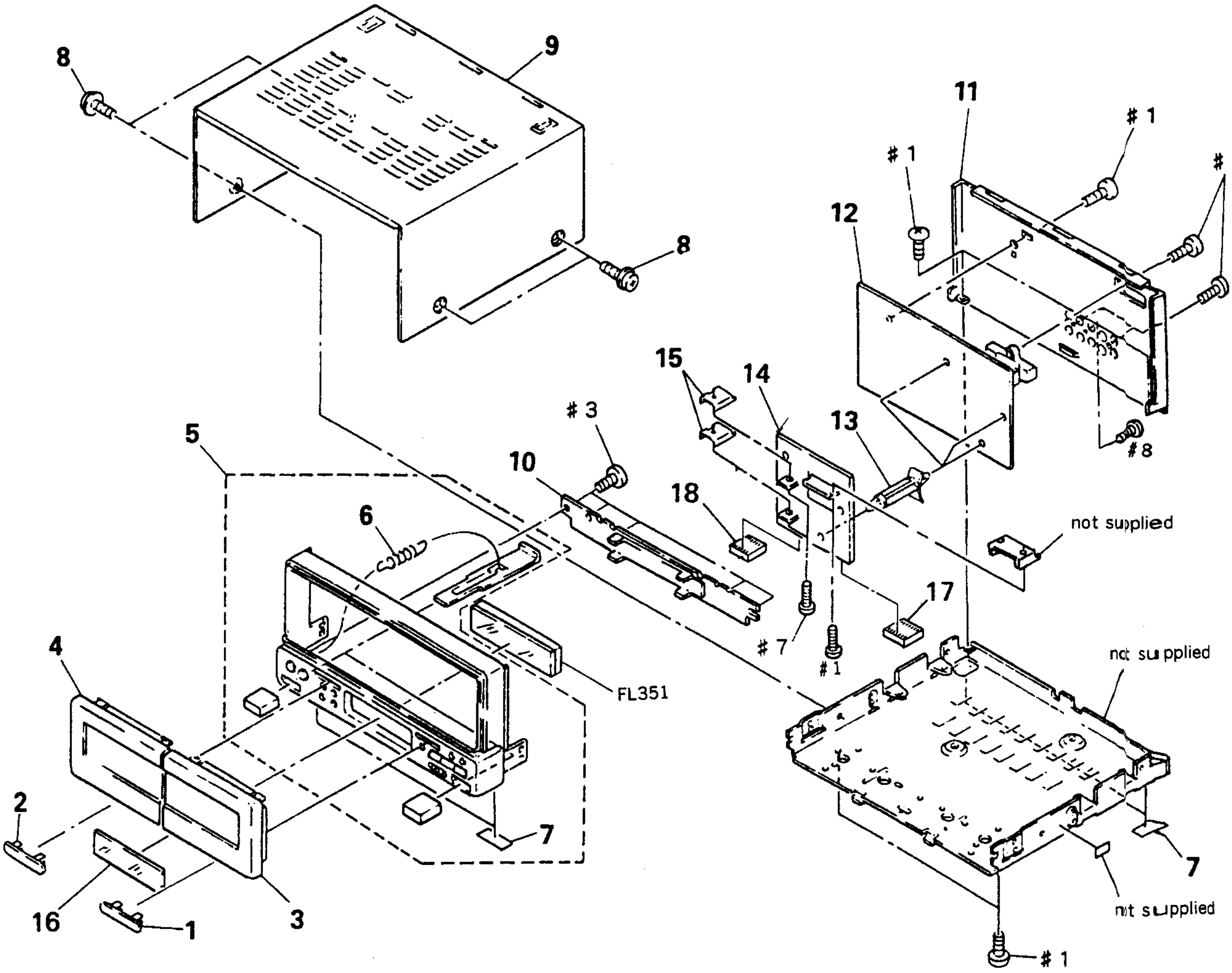

Cd
RES
17
18
Vcc 11
Vo 2 9
Cn 2 10
GND 8
Cn 3 6
Vo 3 7
VEE 5
ERROR AMP
ERROR AMP
ERROR AMP
ERROR AMP
V REF.
C. LIM.
THERMAL PRL.
ON · OFF
RES. GEN.
VCC
60K
30K
100
≈140 μ A
≈2.4V
13 Vo 1
12 Cn 1
3 V quick
4 V mute
2
EN
1
EN delay
14
CnA
15
VoA1
16
VoA2

SECTION 6
EXPLEDED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.
- G: Germany model

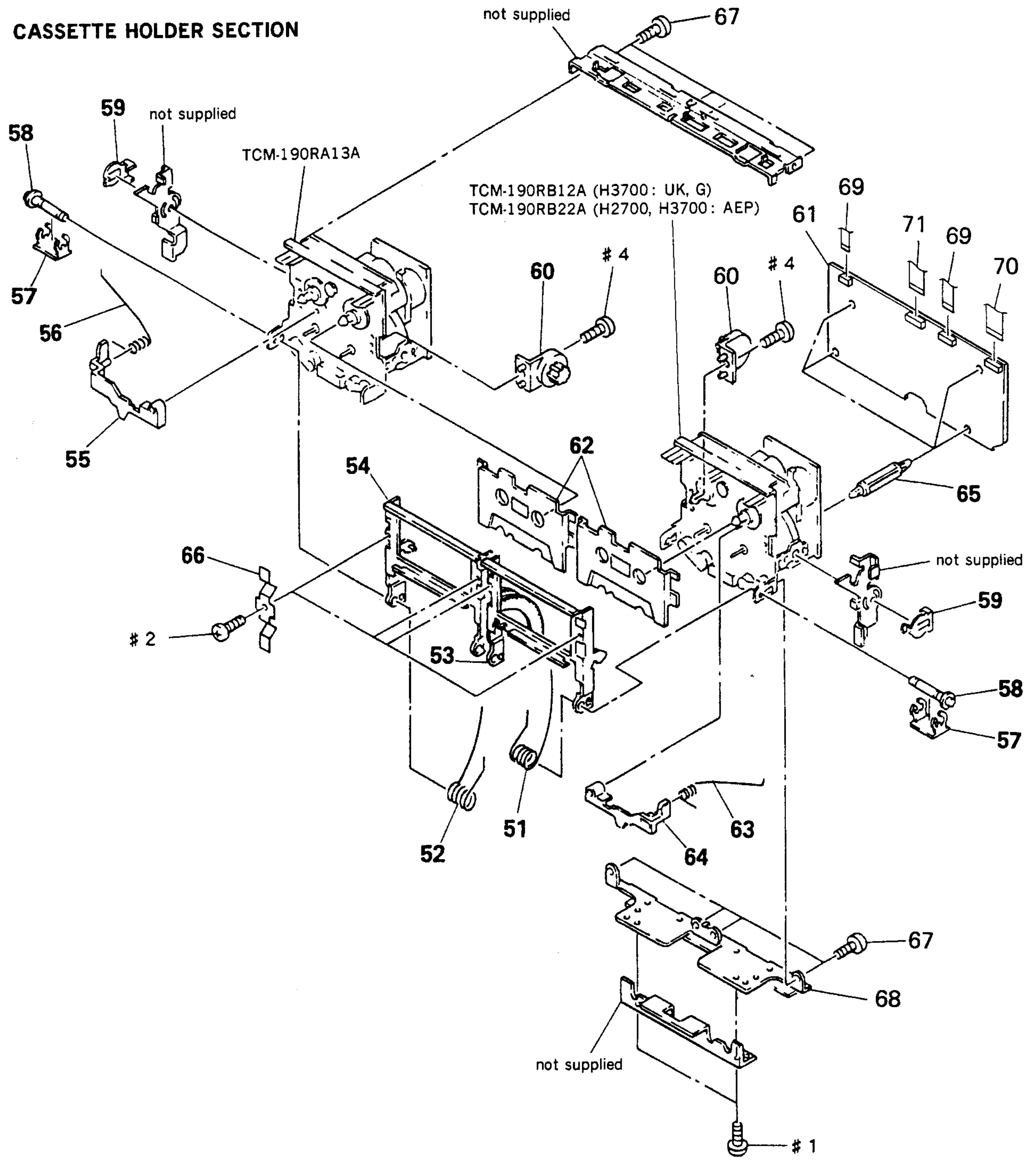
6-1. CABINET SECTION



Ref.No.	Part No.	Description	Remark
1	3-367-872-31	COVER (AZIMUTH)	
2	3-367-872-21	COVER (AZIMUTH)	
3	X-3364-893-1	LID (B) ASSY, CASSETTE (AEP)	
3	X-3364-896-1	LID (B) (EX) ASSY, CASSETTE (UK, G)	
4	X-3364-894-1	LID (A) ASSY, CASSETTE	
5	X-3364-895-1	PANEL ASSY, FRONT	
6	3-567-110-00	SPRING, TENSION	
7	4-930-336-21	FOOT (FELT)	
8	3-363-099-01	SCREW (CASE +3X8 TP2)	
* 9	4-944-522-21	CASE (K211522)	
* 10	A-2006-693-A	PANEL BOARD, COMPLETE	

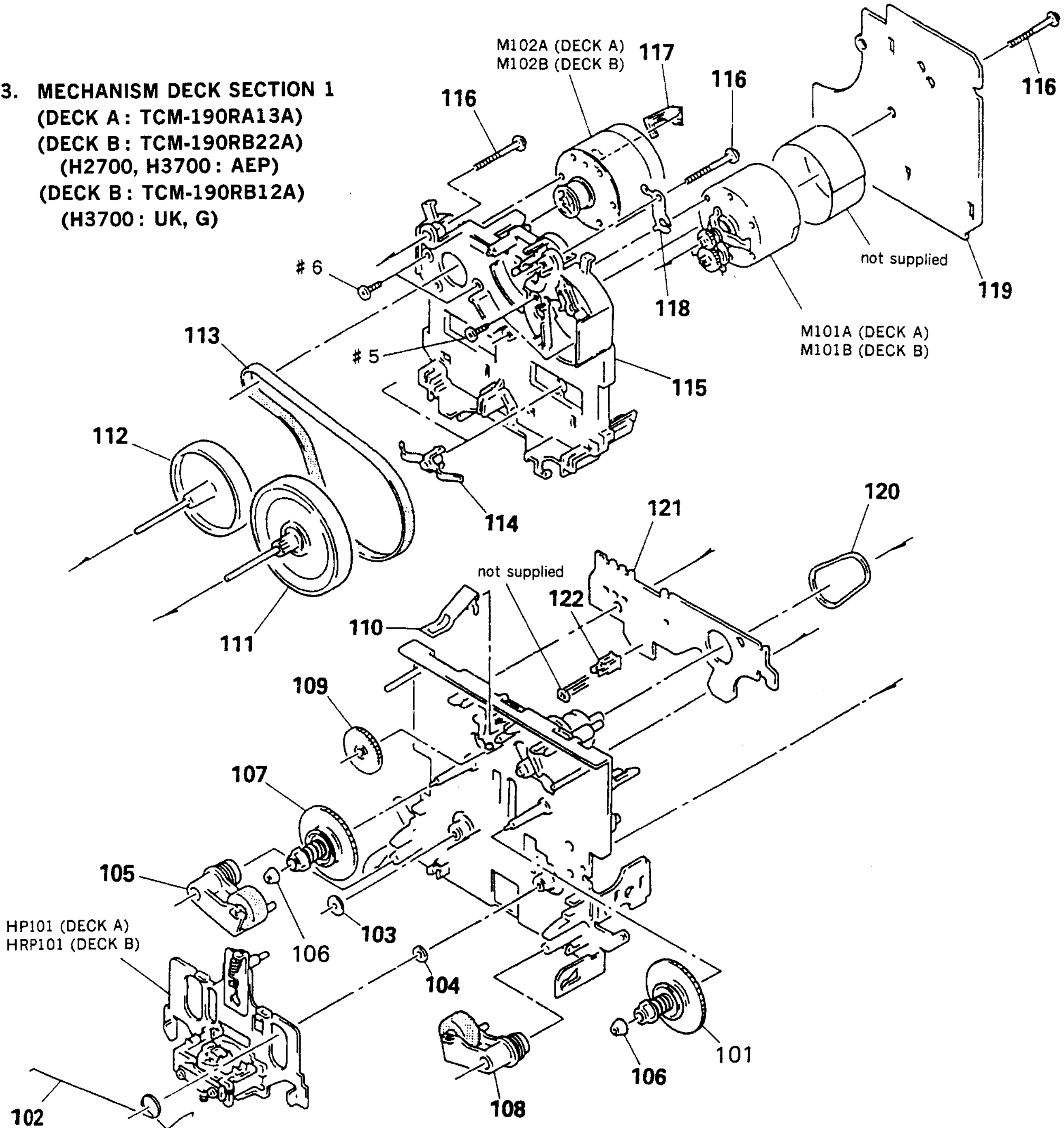
Ref. No.	Part No.	Description	Remark
* 11	3-374-471-21	PANEL, BACK (H3700:AEP)	
* 11	3-374-471-31	PANEL, BACK (H3700:G)	
* 11	3-374-471-41	PANEL, BACK (EXCEPT H2700:G)	
* 11	3-374-471-51	PANEL, BACK (H2700:G)	
* 11	3-375-041-51	PANEL, BACK (H3700:UK)	
* 12	A-2006-732-A	PIN JACK BOARD, COMPLETE	
* 13	3-703-353-02	SUPPORT, PC BOARD	
* 14	A-2006-735-A	POWER BOARD, COMPLETE	
* 15	3-309-144-21	HEAT SINK	
16	3-367-862-01	WINDOW (PANEL)	
* 17	1-573-188-11	CONNECTOR, BRIDGE 7P	
* 18	1-573-389-11	COONECTOR, BRIDGE 8P	
FL351	1-519-708-11	INDICATOR TUBE, FLUORESCENT	

6-2. CASSETTE HOLDER SECTION


not supplied
67
59
not supplied
58
TCM-190RA13A
TCM-190RB12A (H3700: UK, G)
TCM-190RB22A (H2700, H3700: AEP)
69
61
71
69
70
57
60
# 4
60
# 4
56
55
62
54
65
66
not supplied
59
# 2
53
58
57
52
51
63
64
67
68
not supplied
# 1

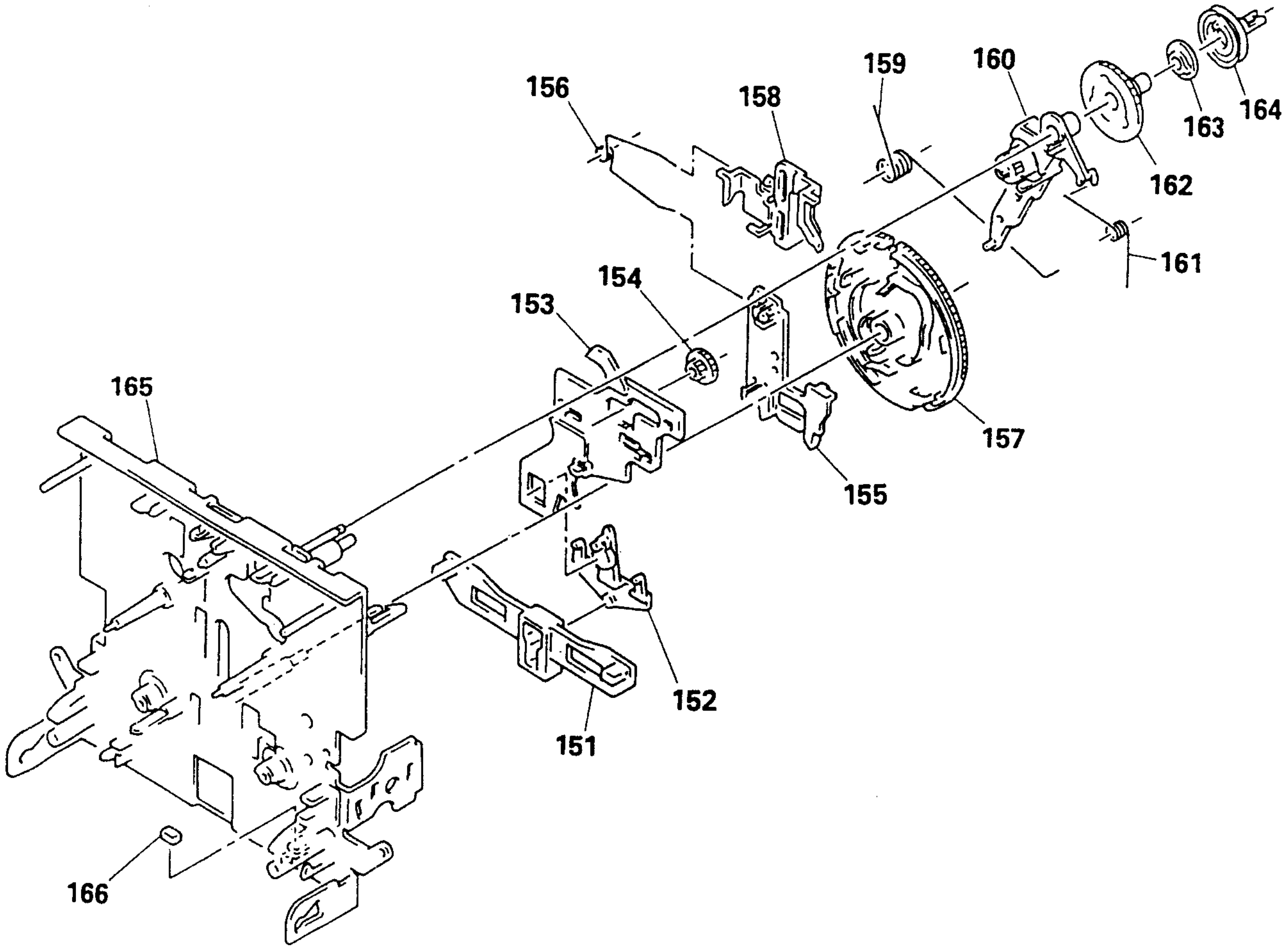
Ref. No.	Part No.	Description	Remark
51	3-354-960-01	SPRING (LOADING R), TORSION	
52	3-354-959-01	SPRING (LOADING L), TORSION	
53	X-3362-856-1	HOLDER (R) ASSY, CASSETTE	
54	X-3362-857-1	HOLDER (L) ASSY, CASSETTE	
55	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
56	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
57	3-367-720-01	RING (W), RETAINING	
58	3-367-721-01	SHAFT (FULCRUM SHAFT)	
59	3-354-957-01	JOINT (LOCK LEVER)	
60	3-354-963-01	DAMPER	
* 61	A-2006-728-A	MAIN BOARD, COMPLETE (H2700, H3700:AEP)	
* 61	A-2006-729-A	MAIN BOARD, COMPLETE (H3700:UK, G)	
62	3-367-711-01	RETAINER, CASSETTE	
63	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
64	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
* 65	3-682-419-21	HOLDER, P. C. B	
66	3-340-137-01	SPRING, CASSETTE RETAINER	
67	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
* 68	3-367-724-01	JOINT (LOWER)	
69	1-590-902-11	WIRE, FLAT TYPE (9 CORE)	
70	1-590-903-11	WIRE, FLAT TYPE (15 CORE)	
71	1-590-904-11	WIRE, FLAT TYPE (12 CORE)	

6-3. MECHANISM DECK SECTION 1
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB22A)
(H2700, H3700 : AEP)
(DECK B : TCM-190RB12A)
(H3700 : UK, G)


M102A (DECK A)
M102B (DECK B)
117
116
116
116
#6
#5
113
112
111
114
115
118
119
not supplied
M101A (DECK A)
M101B (DECK B)
121
120
not supplied
122
110
109
107
105
106
103
104
HP101 (DECK A)
HRP101 (DECK B)
102
108
106
101

Ref. No.	Part No.	Description	Remark
101	X-3359-404-1	TABLE ASSY, REEL	
102	3-359-455-01	SPRING, TORSION	
103	3-356-714-01	WASHER	
104	3-356-713-01	WASHER	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
106	3-362-308-01	CAP (REEL)	
107	X-3362-078-1	TABLE ASSY (B), REEL	
108	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
109	3-359-424-01	GEAR (REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF	
111	X-3364-554-1	FLYWHEEL (FWD) ASSY	
112	X-3359-410-1	FLYWHEEL (REV) ASSY	
113	3-359-417-01	BELT (FLAT), CAPSTAN	
114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
* 115	3-359-436-01	BASE (THRUST RETAINER), FITTING	
116	3-359-414-01	SCREW (+PTPWH 2X23)	
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
118	3-359-450-01	PLATE, GROUND	
* 119	A-2006-399-A	MD-A BOARD, COMPLETE	
* 119	A-2006-400-A	MD-B BOARD, COMPLETE (H2700, H3700: AEP)	
* 119	A-2006-401-A	MD-B HX PRO BOARD, COMPLETE(H3700: UK, G)	
120	3-359-466-01	BELT (FR), SQUARE	
* 121	1-634-841-14	SW-A BOARD (DECK A)	
* 121	1-634-841-14	SW-B BOARD (DECK B)	
122	3-343-419-01	HOLDER (S SENSOR A)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTOR ASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	
HP101	A-2003-868-A	BASE ASSY, HEAD (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (DECK B)	

6-4. MECHANISM DECK SECTION 2
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB22A) (H2700, H3700 : AEP)
(DECK B : TCM-190RB12A) (H3700 : UK, G)



Ref.No.	Part No.	Description	Remark
* 151	3-359-425-01	SLIDER (REVERSE SLIDER)	
152	3-359-426-01	LEVER (REVERSE LEVER)	
* 153	3-359-415-01	SLIDER (TRIGGER SLIDER)	
154	3-359-448-01	GEAR (TRIGGER)	
* 155	3-359-427-01	SLIDER (LEVERSE SLIDER)	
156	3-359-454-01	SPRING, TORSION	
157	3-359-420-01	GEAR (CAM GEAR)	
158	3-359-429-01	SLIDER (BRAKE PLATE)	

Ref.No.	Part No.	Description	Remark
159	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
160	X-3359-405-1	LEVER (FR ARM) ASSY	
161	3-359-453-01	SPRING (FR ARM), TORSION	
162	3-359-419-01	GEAR (FR GEAR)	
163	3-359-421-01	CLUTCH (REEL DISK)	
164	3-359-418-01	PULLEY (FR PULLEY)	
165	X-3363-790-1	CHASSIS ASSY, MECHANICAL	
166	3-359-469-01	SPACER	

SECTION 7
ELECTRICAL PARTS LIST

MAIN **PANEL**
PIN JACK **POWER**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

- G : Germany model

Ref. No.	Part No.	Description			Remark
*	A-2006-728-A	MAIN BOARD, COMPLETE (H2700,H3700:AEP)			
*	A-2006-729-A	MAIN BOARD, COMPLETE (H3700:UK,G)			
		***			
*	A-2006-693-A	PANEL BOARD, COMPLETE			
		*********************			
*	A-2006-732-A	PIN JACK BOARD, COMPLETE			
		************************			
*	A-2006-735-A	POWER BOARD, COMPLETE			
		*********************			
*	3-309-144-21	HEAT SINK			
*	3-367-839-01	HOLDER, FL TUBE			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
	7-682-547-04	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C101	1-136-158-00	FILM	0.027uF	5%	50V
C102	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C103	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C104	1-106-351-00	MYLAR	2200PF	5%	200V
C105	1-106-351-00	MYLAR	2200PF	5%	200V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-136-174-00	FILM	0.56uF	5%	50V
C108	1-136-171-00	FILM	0.33uF	5%	50V
C109	1-164-346-11	CERAMIC CHIP	1uF		16V
C110	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C111	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C112	1-164-346-11	CERAMIC CHIP	1uF		16V
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C114	1-164-346-11	CERAMIC CHIP	1uF		16V
C115	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C116	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C201	1-136-158-00	FILM	0.027uF	5%	50V
C202	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C203	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C204	1-106-351-00	MYLAR	2200PF	5%	200V
C205	1-106-351-00	MYLAR	2200PF	5%	200V
C206	1-164-346-11	CERAMIC CHIP	1uF		16V
C207	1-136-174-00	FILM	0.56uF	5%	50V
C208	1-136-171-00	FILM	0.33uF	5%	50V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C211	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C212	1-164-346-11	CERAMIC CHIP	1uF		16V
C213	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP	1uF		16V
C215	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C216	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C351	1-126-163-11	ELECT	4.7uF	20%	50V
C352	1-124-234-00	ELECT	22uF	20%	16V
C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C409	1-124-465-00	ELECT	0.47uF	20%	50V
C410	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C411	1-126-163-11	ELECT	4.7uF	20%	50V
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C414	1-124-257-00	ELECT	2.2uF	20%	50V
C416	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C417	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C459	1-124-465-00	ELECT	0.47uF	20%	50V
C460	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C461	1-126-163-11	ELECT	4.7uF	20%	50V
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C464	1-124-257-00	ELECT	2.2uF	20%	50V
C466	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C467	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V

MAIN **PANEL** **PIN JACK** **POWER**

Ref. No.	Part No.	Description			Remark
C486	1-126-157-11	ELECT	10uF	20%	16V
C487	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C488	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C489	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C490	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C491	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C492	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C493	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C494	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C495	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C496	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C497	1-126-301-11	ELECT	1uF	20%	50V
C501	1-126-936-11	ELECT	3300uF	20%	16V
C502	1-126-936-11	ELECT	3300uF	20%	16V
C503	1-124-360-00	ELECT	1000uF	20%	16V
C504	1-126-936-11	ELECT	3300uF	20%	16V
C505	1-124-907-11	ELECT	10uF	20%	50V
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C507	1-124-903-11	ELECT	1uF	20%	50V
C508	1-124-472-11	ELECT	470uF	20%	10V
C509	1-124-472-11	ELECT	470uF	20%	10V
C510	1-124-477-11	ELECT	47uF	20%	25V
C512	1-124-477-11	ELECT	47uF	20%	25V
C513	1-124-903-11	ELECT	1uF	20%	50V
C514	1-124-472-11	ELECT	470uF	20%	10V
C515	1-124-477-11	ELECT	47uF	20%	25V
C516	1-124-903-11	ELECT	1uF	20%	50V
C518	1-126-927-11	ELECT	2200uF	20%	10V
C519	1-124-473-11	ELECT	1000uF	20%	10V
C520	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C522	1-124-927-11	ELECT	4.7uF	20%	100V
C526	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C527	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C528	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C601	1-164-346-11	CERAMIC CHIP	1uF		16V
C602	1-164-346-11	CERAMIC CHIP	1uF		16V
C603	1-164-346-11	CERAMIC CHIP	1uF		16V
C604	1-164-346-11	CERAMIC CHIP	1uF		16V
C605	1-164-346-11	CERAMIC CHIP	1uF		16V
C606	1-164-346-11	CERAMIC CHIP	1uF		16V
C607	1-164-346-11	CERAMIC CHIP	1uF		16V
C608	1-124-257-00	ELECT	2.2uF	20%	50V
C609	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C610	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C611	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C612	1-124-257-00	ELECT	2.2uF	20%	50V
C615	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C616	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V

Ref. No.	Part No.	Description			Remark
C617	1-124-472-11	ELECT	470uF	20%	10V
C618	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C619	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C620	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C621	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C622	1-124-472-11	ELECT	470uF	20%	10V
C623	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C624	1-124-472-11	ELECT	470uF	20%	10V
C625	1-126-059-11	ELECT	10uF	20%	50V
C626	1-126-059-11	ELECT	10uF	20%	50V
C629	1-126-157-11	ELECT	10uF	20%	16V
C632	1-136-594-11	FILM	0.018uF	5%	100V
C633	1-124-465-00	ELECT	0.47uF	20%	50V
C639	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C862	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C4003	1-124-589-11	ELECT	47uF	20%	16V
C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C4022	1-124-589-11	ELECT	47uF	20%	16V
C4030	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C4031	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C4050	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C5001	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C5002	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C5004	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C5005	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C5110	1-124-903-11	ELECT	1uF	20%	50V
C6008	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6009	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6010	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6011	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C6012	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C6013	1-126-023-11	ELECT	100uF	20%	16V
C6020	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6021	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6022	1-124-927-11	ELECT	4.7uF	20%	100V
C6026	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6027	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6029	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6030	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6031	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C6035	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C6050	1-126-157-11	ELECT (H2700, H3700:AEP)	10uF	20%	16V

< CONNECTOR >

CN351	1-580-883-21	SOCKET, CONNECTOR (SMT) 12P

MAIN **PANEL** **PIN JACK** **POWER**

Ref. No.	Part No.	Description	Remark
* CN401	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN402	1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
* CN403	1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	
CN601	1-573-101-11	SOCKET, CONNECTOR 9P	
CN602	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN603	1-573-101-11	SOCKET, CONNECTOR 9P	
CN604	1-580-783-11	CONNECTOR, BOARD TO BOARD	
* CN605	1-568-858-11	SOCKET, CONNECTOR 15P	
CN606	1-568-795-11	SOCKET, CONNECTOR 12P	
CN607	1-580-783-11	CONNECTOR, BOARD TO BOARD	
* CNJ401	1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
* CNJ402	1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P	
* CNJ403	1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P	

< DIODE >

Ref. No.	Part No.	Description	Remark
D301	8-719-027-53	DIODE SEL4226C (DUBBING MODE)	
D302	8-719-027-53	DIODE SEL4226C (CD SYNCHRO)	
D303	8-719-027-52	DIODE SEL4226E (DECK A)	
D304	8-719-027-52	DIODE SEL4226E (DECK B)	
D401	8-719-990-36	DIODE DCA010	
D403	8-719-210-33	DIODE EC10DS2	
D404	8-719-210-33	DIODE EC10DS2	
D405	8-719-990-36	DIODE DCA010	
D501	8-719-210-39	DIODE EC10QS-04	
D502	8-719-210-39	DIODE EC10QS-04	
D503	8-719-210-39	DIODE EC10QS-04	
D504	8-719-210-39	DIODE EC10QS-04	
D505	8-719-016-74	DIODE 1SS352	
D506	8-719-021-77	DIODE UZM8.2Z	
D507	8-719-021-77	DIODE UZM8.2Z	
D508	8-719-210-33	DIODE EC10DS2	
D509	8-719-210-33	DIODE EC10DS2	
D510	8-719-210-33	DIODE EC10DS2	
D511	8-719-210-33	DIODE EC10DS2	
D512	8-719-016-74	DIODE 1SS352	
D513	8-719-016-74	DIODE 1SS352	
D514	8-719-016-74	DIODE 1SS352	
D601	8-719-422-91	DIODE MA8091	
D602	8-719-016-74	DIODE 1SS352	
D603	8-719-016-74	DIODE 1SS352	
D604	8-719-210-39	DIODE EC10QS-04	
D605	8-719-016-74	DIODE 1SS352	
D606	8-719-422-46	DIODE MA8056	
D607	8-719-210-33	DIODE EC10DS2	
D608	8-719-210-33	DIODE EC10DS2	
D4001	8-719-016-74	DIODE 1SS352	
D6010	8-719-016-74	DIODE 1SS352	
D6011	8-719-016-74	DIODE 1SS352	
D6012	8-719-016-74	DIODE 1SS352	

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description	Remark
FL351	1-519-708-11	INDICATOR TUBE, FLUORESCENT	

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-300-71	IC HD14053BFP	
IC102	8-752-037-90	IC CXA1331M	
IC103	8-752-055-60	IC CXA1578M	
IC104	8-759-636-55	IC M5218AFP	
IC105	8-759-516-47	IC CD4066BCM	
IC106	8-759-998-71	IC BA3308F	
IC351	8-759-323-35	IC HD614023-FA93	
IC401	8-759-636-55	IC M5218AFP	
IC402	8-759-636-55	IC M5218AFP	
IC403	8-759-009-05	IC MC14051BF	
IC404	8-759-009-05	IC MC14051BF	
IC405	8-759-516-47	IC CD4066BCM	
IC406	8-759-636-35	IC M50760-315FP	
IC501	8-759-041-09	IC LA5603-S	
IC601	8-759-058-40	IC M50944-128FP	
IC602	8-759-636-67	IC M50925-482FP	
IC603	8-759-207-05	IC TA7272P	
IC604	8-759-636-55	IC M5218AFP	
IC605	8-759-516-41	IC CD4052BCM	
IC6001	8-759-634-43	IC M51953BFP	

< IC LINK >

Ref. No.	Part No.	Description	Remark
⚠ICP501	1-532-843-21	LINK, IC	
⚠ICP502	1-532-843-21	LINK, IC	

< JACK >

Ref. No.	Part No.	Description	Remark
J401	1-565-304-11	JACK, PIN 4P (DAT OUT, PHONO IN)	
* J402	1-569-812-11	JACK, PIN 6P (VIDEO IN/OUT, DAT IN	

< JUMPER RESISTOR >

Ref. No.	Part No.	Description	Remark
JW3	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW8	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW12	1-216-295-00	METAL CHIP 0 5% 1/10W	

< COIL >

Ref. No.	Part No.	Description	Remark
L601	1-410-761-11	INDUCTOR 0.68mH	
L4001	1-410-381-11	INDUCTOR CHIP 10uH	
L6001	1-410-482-31	INDUCTOR 100uH	
L6002	1-410-381-11	INDUCTOR CHIP 10uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q102	8-729-113-40	TRANSISTOR FA1A4Z-L68	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MAIN PANEL PIN JACK POWER

Ref. No.	Part No.	Description			Remark
Q201	8-729-113-13	TRANSISTOR	FA1A4M-L33		
Q202	8-729-113-40	TRANSISTOR	FA1A4Z-L68		
Q401	8-729-805-65	TRANSISTOR	2SA1344		
Q402	8-729-805-65	TRANSISTOR	2SA1344		
Q406	8-729-602-36	TRANSISTOR	2SA1602-F		
Q407	8-729-602-21	TRANSISTOR	2SC4154-F		
Q501	8-729-209-15	TRANSISTOR	2SD2012		
Q502	8-729-141-83	TRANSISTOR	2SB1094-LK		
Q503	8-729-805-65	TRANSISTOR	2SA1344		
Q504	8-729-602-21	TRANSISTOR	2SC4154-F		
Q505	8-729-602-21	TRANSISTOR	2SC4154-F		
Q506	8-729-602-36	TRANSISTOR	2SA1602-F		
Q510	8-729-602-21	TRANSISTOR	2SC4154-F		
Q601	8-729-805-65	TRANSISTOR	2SA1344		
Q602	8-729-805-65	TRANSISTOR	2SA1344		
Q603	8-729-113-13	TRANSISTOR	FA1A4M-L33		
Q604	8-729-805-65	TRANSISTOR	2SA1344		
Q605	8-729-805-69	TRANSISTOR	2SA1341		
Q606	8-729-805-45	TRANSISTOR	2SC3395		
Q607	8-729-805-65	TRANSISTOR	2SA1344		
Q608	8-729-805-65	TRANSISTOR	2SA1344		
Q609	8-729-113-13	TRANSISTOR	FA1A4M-L33		
Q611	8-729-805-65	TRANSISTOR	2SA1344		
Q612	8-729-113-13	TRANSISTOR	FA1A4M-L33		
Q613	8-729-113-13	TRANSISTOR	FA1A4M-L33		
Q616	8-729-804-41	TRANSISTOR	2SB1122-S		
Q617	8-729-804-41	TRANSISTOR	2SB1122-S		
Q619	8-729-808-01	TRANSISTOR	2SD1622-S		
Q620	8-729-808-01	TRANSISTOR	2SD1622-S		
Q6005	8-729-113-13	TRANSISTOR	FA1A4M-L33		
		< RESISTOR >			
R101	1-216-089-00	METAL CHIP	47K	5%	1/10W
R102	1-216-089-00	METAL CHIP	47K	5%	1/10W
R103	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R104	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R105	1-216-105-00	METAL CHIP	220K	5%	1/10W
R106	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R107	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R108	1-216-043-00	METAL CHIP	560	5%	1/10W
R109	1-216-073-00	METAL CHIP	10K	5%	1/10W
R110	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R111	1-216-097-00	METAL CHIP	100K	5%	1/10W
R112	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R113	1-216-089-00	METAL CHIP	47K	5%	1/10W
R114	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R115	1-216-105-00	METAL CHIP	220K	5%	1/10W
R116	1-216-085-00	METAL CHIP	33K	5%	1/10W
R117	1-216-049-00	METAL CHIP	1K	5%	1/10W
R118	1-216-105-00	METAL CHIP	220K	5%	1/10W
R119	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R120	1-216-093-00	METAL CHIP	68K	5%	1/10W
R121	1-216-295-00	METAL CHIP	0	5%	1/10W
R201	1-216-089-00	METAL CHIP	47K	5%	1/10W
R202	1-216-089-00	METAL CHIP	47K	5%	1/10W
R203	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R204	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R205	1-216-105-00	METAL CHIP	220K	5%	1/10W
R206	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R207	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R208	1-216-043-00	METAL CHIP	560	5%	1/10W
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W
R210	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R211	1-216-097-00	METAL CHIP	100K	5%	1/10W
R212	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R213	1-216-089-00	METAL CHIP	47K	5%	1/10W
R214	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R215	1-216-105-00	METAL CHIP	220K	5%	1/10W
R216	1-216-085-00	METAL CHIP	33K	5%	1/10W
R217	1-216-049-00	METAL CHIP	1K	5%	1/10W
R218	1-216-105-00	METAL CHIP	220K	5%	1/10W
R219	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R220	1-216-093-00	METAL CHIP	68K	5%	1/10W
R221	1-216-295-00	METAL CHIP	0	5%	1/10W
R351	1-216-029-00	METAL CHIP	150	5%	1/10W
R352	1-216-033-00	METAL CHIP	220	5%	1/10W
R353	1-216-037-00	METAL CHIP	330	5%	1/10W
R354	1-216-041-00	METAL CHIP	470	5%	1/10W
R355	1-216-045-00	METAL CHIP	680	5%	1/10W
R356	1-216-049-00	METAL CHIP	1K	5%	1/10W
R357	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R359	1-216-045-00	METAL CHIP	680	5%	1/10W
R362	1-216-041-00	METAL CHIP	470	5%	1/10W
R363	1-216-045-00	METAL CHIP	680	5%	1/10W
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W
R365	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R366	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R367	1-216-089-00	METAL CHIP	47K	5%	1/10W
R368	1-216-089-00	METAL CHIP	47K	5%	1/10W
R369	1-216-089-00	METAL CHIP	47K	5%	1/10W
R372	1-216-041-00	METAL CHIP	470	5%	1/10W
R374	1-216-037-00	METAL CHIP	330	5%	1/10W
R375	1-216-081-00	METAL CHIP	22K	5%	1/10W
R376	1-216-121-00	METAL CHIP	1M	5%	1/10W
R377	1-216-085-00	METAL CHIP	33K	5%	1/10W
R378	1-216-025-00	METAL CHIP	100	5%	1/10W
R379	1-216-025-00	METAL CHIP	100	5%	1/10W
R380	1-216-025-00	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description				Remark
R381	1-216-025-00	METAL CHIP	100	5%	1/10W	
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R403	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R404	1-216-041-00	METAL CHIP	470	5%	1/10W	
R405	1-216-041-00	METAL CHIP	470	5%	1/10W	
R407	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R408	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R409	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R410	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R411	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R413	1-216-295-00	METAL CHIP	0	5%	1/10W	
R414	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W	
R415	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R417	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R418	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R419	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R421	1-216-001-00	METAL CHIP	10	5%	1/10W	
R422	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R423	1-216-041-00	METAL CHIP	470	5%	1/10W	
R425	1-216-025-00	METAL CHIP	100	5%	1/10W	
R426	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R427	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R428	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R429	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R430	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R434	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R435	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R436	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R437	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R439	1-216-295-00	METAL CHIP	0	5%	1/10W	
R440	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R441	1-216-295-00	METAL CHIP	0	5%	1/10W	
R442	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R450	1-216-065-00	METAL CHIP	4. 7K	5%	1/10W	
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R452	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R453	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R454	1-216-041-00	METAL CHIP	470	5%	1/10W	
R455	1-216-041-00	METAL CHIP	470	5%	1/10W	
R457	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R458	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R459	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R460	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R461	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R463	1-216-295-00	METAL CHIP	0	5%	1/10W	
R464	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W	
R465	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R467	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R468	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R469	1-216-115-00	METAL CHIP	560K	5%	1/10W	
R470	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R471	1-216-001-00	METAL CHIP	10	5%	1/10W	
R472	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R473	1-216-041-00	METAL CHIP	470	5%	1/10W	
R475	1-216-025-00	METAL CHIP	100	5%	1/10W	
R476	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R477	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R478	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R479	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R495	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R496	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R500	1-216-065-00	METAL CHIP	4. 7K	5%	1/10W	
R501	1-216-033-00	METAL CHIP	220	5%	1/10W	
R502	1-216-041-00	METAL CHIP	470	5%	1/10W	
R503	1-216-041-00	METAL CHIP	470	5%	1/10W	
R504	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R505	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R506	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R508	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R509	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W	
R601	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R602	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R603	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W	
R605	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R607	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R608	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R609	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R610	1-216-082-00	METAL GLAZE	24K	5%	1/10W	
R611	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R612	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R615	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W	
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R617	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R618	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R619	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W	
R620	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R621	1-216-065-00	METAL CHIP	4. 7K	5%	1/10W	
R623	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R624	1-216-043-00	METAL CHIP (H2700, H3700:AEP)	560	5%	1/10W	
R624	1-216-295-00	METAL CHIP (H3700:UK, G)	0	5%	1/10W	

MAIN | PANEL | PIN JACK | POWER

Ref. No.	Part No.	Description				Remark
R625	1-216-061-00	METAL CHIP (H2700, H3700:AEP)	3.3K	5%	1/10W	
R625	1-216-295-00	METAL CHIP (H3700:UK, G)	0	5%	1/10W	
R626	1-216-069-00	METAL CHIP (H2700, H3700:AEP)	6.8K	5%	1/10W	
R626	1-216-295-00	METAL CHIP (H3700:UK, G)	0	5%	1/10W	
R628	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R629	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R630	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R631	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R634	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R635	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R636	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R637	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R638	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R639	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R640	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R641	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R642	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R643	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R644	1-216-025-00	METAL CHIP	100	5%	1/10W	
R645	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R646	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R647	1-216-025-00	METAL CHIP	100	5%	1/10W	
R648	1-216-025-00	METAL CHIP	100	5%	1/10W	
R649	1-216-025-00	METAL CHIP	100	5%	1/10W	
R650	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R651	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R652	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R653	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R654	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R655	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R656	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R661	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R662	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R663	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R664	1-216-045-00	METAL CHIP	680	5%	1/10W	
R665	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R666	1-216-045-00	METAL CHIP	680	5%	1/10W	
R667	1-216-025-00	METAL CHIP	100	5%	1/10W	
R668	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R669	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R670	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R671	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R672	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R673	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R674	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R675	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R676	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R677	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R678	1-216-084-00	METAL CHIP	30K	5%	1/10W	
R679	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R680	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R681	1-216-090-00	METAL CHIP	51K	5%	1/10W	
R682	1-216-025-00	METAL CHIP	100	5%	1/10W	
R686	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R687	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R690	1-216-025-00	METAL CHIP	100	5%	1/10W	
R691	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R692	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R693	1-216-025-00	METAL CHIP	100	5%	1/10W	
R695	1-216-068-00	METAL CHIP (H3700:UK, G)	6.2K	5%	1/10W	
R696	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R697	1-216-077-00	METAL CHIP (H3700:UK, G)	15K	5%	1/10W	
R698	1-216-083-00	METAL CHIP (H3700:UK, G)	27K	5%	1/10W	
R699	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R700	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R5001	1-216-025-00	METAL CHIP	100	5%	1/10W	
R5002	1-216-025-00	METAL CHIP	100	5%	1/10W	
R6001	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R6004	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R6005	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R6010	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R6011	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6012	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6013	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6014	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6015	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6016	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6017	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6018	1-216-298-00	METAL CHIP	2.2	5%	1/10W	
R6050	1-216-025-00	METAL CHIP	100	5%	1/10W	
⚠R6051	1-212-974-00	FUSIBLE	47	5%	1/2W	F
R6060	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		< VARIABLE RESISTOR >				
RV101	1-241-136-11	RES, ADJ, CARBON 10K				
RV201	1-241-136-11	RES, ADJ, CARBON 10K				
		< SWITCH >				
S901	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)				
S902	1-554-303-21	SWITCH, TACTILE (▶▶)				
S903	1-554-303-21	SWITCH, TACTILE (◀◀)				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
S904	1-554-303-21	SWITCH, TACTILE (●REC)	
S905	1-554-303-21	SWITCH, TACTILE (DECK B)	
S906	1-554-303-21	SWITCH, TACTILE (DECK A)	
S907	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)	
S908	1-554-303-21	SWITCH, TACTILE (DOLBY NR)	
S909	1-554-303-21	SWITCH, TACTILE (DUBBING MODE)	
S910	1-554-303-21	SWITCH, TACTILE (■)	
S911	1-554-303-21	SWITCH, TACTILE (◁)	
S912	1-554-303-21	SWITCH, TACTILE (▷)	
S913	1-554-303-21	SWITCH, TACTILE (❚❚PAUSE)	
S914	1-554-303-21	SWITCH, TACTILE (○MUTE)	
S915	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	
		< TRANSFORMER >	
T601	1-450-458-11	TRANSFORMER, DC-DC CONVERTER	
		< TEST PIN >	
* TP601	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* TP6001	1-564-517-11	PLUG, CONNECTOR 2P	
		< VIBRATOR >	
X401	1-577-077-11	OSCILLATOR, CERAMIC (400kHZ)	
X601	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X951	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)	

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Ref. No.	Part No.	Description	Remark
*	A-2006-399-A	MD-A BOARD, COMPLETE ********************	
		< CAPACITOR >	
C11	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C12	1-136-157-00	FILM 0.022uF 5%	50V
C13	1-124-234-00	ELECT 22uF 20%	16V
C18	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C21	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C22	1-136-157-00	FILM 0.022uF 5%	50V
C23	1-124-234-00	ELECT 22uF 20%	16V
C28	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C31	1-124-234-00	ELECT 22uF 20%	16V
C32	1-124-234-00	ELECT 22uF 20%	16V
C71	1-164-346-11	CERAMIC CHIP 1uF	16V
		< CONNECTOR >	
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	

Ref. No.	Part No.	Description	Remark
		< IC >	
IC31A	8-759-106-02	IC uPC4570G2	
		< JUMPER RESISTOR >	
JW1	1-216-295-00	METAL CHIP 0 5%	1/10W
JW51	1-216-296-00	METAL CHIP 0 5%	1/8W
JW52	1-216-296-00	METAL CHIP 0 5%	1/8W
JW53	1-216-296-00	METAL CHIP 0 5%	1/8W
JW54	1-216-296-00	METAL CHIP 0 5%	1/8W
		< TRANSISTOR >	
Q71A	8-729-602-36	TRANSISTOR 2SA1602-F	
		< RESISTOR >	
R11	1-216-099-00	METAL CHIP 120K 5%	1/10W
R12	1-216-025-00	METAL CHIP 100 5%	1/10W
R13	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R14	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R21	1-216-099-00	METAL CHIP 120K 5%	1/10W
R22	1-216-025-00	METAL CHIP 100 5%	1/10W
R23	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R24	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R31	1-216-033-00	METAL CHIP 220 5%	1/10W
R32	1-216-033-00	METAL CHIP 220 5%	1/10W
R71	1-216-082-00	METAL GLAZE 24K 5%	1/10W
R72	1-216-081-00	METAL CHIP 22K 5%	1/10W
R73	1-216-089-00	METAL CHIP 47K 5%	1/10W
R74	1-216-089-00	METAL CHIP 47K 5%	1/10W
		< VARIABLE RESISTOR >	
RV11A	1-238-012-11	RES, ADJ, CARBON 1K	
RV21A	1-238-012-11	RES, ADJ, CARBON 1K	
RV71A	1-238-016-11	RES, ADJ, CARBON 10K	
RV72A	1-238-016-11	RES, ADJ, CARBON 10K	

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Ref. No.	Part No.	Description	Remark
*	A-2006-400-A	MD-B BOARD, COMPLETE (H2700, H3700:AEP) **************************************	
*	A-2006-401-A	MD-B HX PRO BOARD, COMPLETE (H3700:UK, G) ***************************************	
		< CAPACITOR >	
C11	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C12	1-136-157-00	FILM 0.022uF 5%	50V
C13	1-124-234-00	ELECT 22uF 20%	16V
C14	1-136-273-91	FILM 75PF 5% (H2700, H3700:AEP)	630V
C15	1-164-080-11	CERAMIC 390PF 10% (H2700, H3700:AEP)	50V

MD-B　MD-B HX PRO

Ref. No.	Part No.	Description			Remark
C17	1-163-103-00	CERAMIC CHIP (H2700, H3700:AEP)	27PF	5%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C24	1-136-273-91	FILM (H2700, H3700:AEP)	75PF	5%	630V
C25	1-164-080-11	CERAMIC (H2700, H3700:AEP)	390PF	10%	50V
C27	1-163-103-00	CERAMIC CHIP (H2700, H3700:AEP)	27PF	5%	50V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP (H2700, H3700:AEP)	0.0068uF	10%	50V
C51	1-164-161-11	CERAMIC CHIP (H3700:UK, G)	0.0022uF	10%	100V
C52	1-163-019-00	CERAMIC CHIP (H2700, H3700:AEP)	0.0068uF	10%	50V
C52	1-164-161-11	CERAMIC CHIP (H3700:UK, G)	0.0022uF	10%	100V
C53	1-163-022-00	CERAMIC CHIP (H2700, H3700:AEP)	0.012uF	10%	50V
C53	1-163-019-00	CERAMIC CHIP (H3700:UK, G)	0.0068uF	10%	50V
C54	1-136-559-11	FILM (H2700, H3700:AEP)	0.0047uF	5%	630V
C54	1-136-601-11	FILM (H3700:UK, G)	0.01uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-024-00	CERAMIC CHIP (H2700, H3700:AEP)	0.018uF	10%	50V
C71	1-164-346-11	CERAMIC CHIP	1uF		16V
C80	1-124-234-00	ELECT (H3700:UK, G)	22uF	20%	16V
C81	1-164-232-11	CERAMIC CHIP (H3700:UK, G)	0.01uF		50V
C82	1-136-157-00	FILM (H3700:UK, G)	0.022uF	5%	50V
C83	1-164-004-11	CERAMIC CHIP (H3700:UK, G)	0.1uF	10%	25V
C84	1-136-478-11	FILM (H3700:UK, G)	470PF	5%	630V
C85	1-136-433-11	FILM (H3700:UK, G)	100PF	5%	630V
C86	1-163-143-00	CERAMIC CHIP (H3700:UK, G)	0.0012uF	5%	50V
C87	1-136-273-91	FILM (H3700:UK, G)	75PF	5%	630V
C88	1-163-003-11	CERAMIC CHIP (H3700:UK, G)	330PF	10%	50V
C89	1-124-234-00	ELECT (H3700:UK, G)	22uF	20%	16V
C90	1-107-045-00	MICA (H3700:UK, G)	3.9PF		500V
C91	1-164-232-11	CERAMIC CHIP (H3700:UK, G)	0.01uF		50V
C92	1-136-157-00	FILM (H3700:UK, G)	0.022uF	5%	50V
C93	1-164-004-11	CERAMIC CHIP (H3700:UK, G)	0.1uF	10%	25V
C94	1-136-478-11	FILM (H3700:UK, G)	470PF	5%	630V
C95	1-136-433-11	FILM (H3700:UK, G)	100PF	5%	630V
C96	1-163-143-00	CERAMIC CHIP (H3700:UK, G)	0.0012uF	5%	50V
C97	1-136-273-91	FILM (H3700:UK, G)	75PF	5%	630V
C98	1-163-003-11	CERAMIC CHIP (H3700:UK, G)	330PF	10%	50V
C99	1-164-005-11	CERAMIC CHIP (H3700:UK, G)	0.47uF		25V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD (H2700, H3700:AEP)			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD (H2700, H3700:AEP)			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P (H2700, H3700:AEP)			
* CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD (H3700:UK, G)			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD (H3700:UK, G)			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
* CNP72	1-580-411-11	SOCKET, CONNECTOR 4P (H3700:UK, G)			
		< DIODE >			
D31	8-719-016-74	DIODE　1SS352			
		< IC >			
IC31B	8-759-106-02	IC　uPC4570G2			
IC81	8-759-106-56	IC　uPC1297CA (H3700:UK, G)			
		< JUMPER RESISTOR >			
JW1	1-216-296-00	METAL CHIP (H2700, H3700:AEP)	0	5%	1/8W
JW2	1-216-295-00	METAL CHIP (H2700, H3700:AEP)	0	5%	1/10W

MD-B **MD-B HX PRO**

Ref. No.	Part No.	Description	Remark
JW3	1-216-295-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/10W
JW4	1-216-295-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/10W
JW5	1-216-295-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/10W
JW6	1-216-295-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/10W
JW7	1-216-295-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/10W
JW52	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW53	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW54	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW55	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW56	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW57	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW58	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW59	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW60	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
JW61	1-216-296-00	METAL CHIP 0 5% (H2700, H3700:AEP)	1/8W
		< COIL >	
L11	1-410-780-11	INDUCTOR 27mH	(H2700, H3700:AEP)
L21	1-410-780-11	INDUCTOR 27mH	(H2700, H3700:AEP)
L81	1-410-780-11	INDUCTOR 27mH	(H3700:UK, G)
L91	1-410-780-11	INDUCTOR 27mH	(H3700:UK, G)
		< TRANSISTOR >	
Q51	8-729-808-01	TRANSISTOR 2SD1622-S	
Q52	8-729-808-01	TRANSISTOR 2SD1622-S	
Q53	8-729-808-01	TRANSISTOR 2SD1622-S	
Q71B	8-729-602-36	TRANSISTOR 2SA1602-F (H2700, H3700:AEP)	
Q71B	8-729-216-22	TRANSISTOR 2SA1162-C (H3700:UK, G)	
		< RESISTOR >	
R11	1-216-099-00	METAL CHIP 120K 5%	1/10W
R12	1-216-025-00	METAL CHIP 100 5%	1/10W
R13	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R14	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
⚠R15	1-249-430-11	CARBON 12K 5% (H2700, H3700:AEP)	1/4W F

Ref. No.	Part No.	Description	Remark
R21	1-216-099-00	METAL CHIP 120K 5%	1/10W
R22	1-216-025-00	METAL CHIP 100 5%	1/10W
R23	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R24	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
⚠R25	1-249-430-11	CARBON 12K 5% (H2700, H3700:AEP)	1/4W F
R31	1-216-033-00	METAL CHIP 220 5%	1/10W
R32	1-216-033-00	METAL CHIP 220 5%	1/10W
⚠R41	1-249-393-11	CARBON 10 5% (H2700, H3700:AEP)	1/4W F
⚠R42	1-249-393-11	CARBON 10 5% (H2700, H3700:AEP)	1/4W F
R51	1-216-075-00	METAL CHIP 12K 5% (H2700, H3700:AEP)	1/10W
R51	1-216-097-00	METAL CHIP 100K 5% (H3700:UK, G)	1/10W
R52	1-216-075-00	METAL CHIP 12K 5% (H2700, H3700:AEP)	1/10W
R52	1-216-097-00	METAL CHIP 100K 5% (H3700:UK, G)	1/10W
R53	1-216-073-00	METAL CHIP 10K 5%	1/10W
R54	1-216-309-00	METAL CHIP 5.6 5%	1/10W
R55	1-216-309-00	METAL CHIP 5.6 5%	1/10W
R56	1-216-298-00	METAL CHIP 2.2 5% (H2700, H3700:AEP)	1/10W
R57	1-216-298-00	METAL CHIP 2.2 5% (H3700:UK, G)	1/10W
R71	1-216-082-00	METAL GLAZE 24K 5%	1/10W
R72	1-216-081-00	METAL CHIP 22K 5%	1/10W
R73	1-216-089-00	METAL CHIP 47K 5%	1/10W
R74	1-216-089-00	METAL CHIP 47K 5%	1/10W
R81	1-216-073-00	METAL CHIP 10K 5% (H3700:UK, G)	1/10W
R82	1-216-085-00	METAL CHIP 33K 5% (H3700:UK, G)	1/10W
R83	1-216-001-00	METAL CHIP 10 5% (H3700:UK, G)	1/10W
R84	1-216-101-00	METAL CHIP 150K 5% (H3700:UK, G)	1/10W
R85	1-216-075-00	METAL CHIP 12K 5% (H3700:UK, G)	1/10W
R91	1-216-073-00	METAL CHIP 10K 5% (H3700:UK, G)	1/10W
R92	1-216-085-00	METAL CHIP 33K 5% (H3700:UK, G)	1/10W
R93	1-216-001-00	METAL CHIP 10 5% (H3700:UK, G)	1/10W
R94	1-216-101-00	METAL CHIP 150K 5% (H3700:UK, G)	1/10W
R95	1-216-075-00	METAL CHIP 12K 5% (H3700:UK, G)	1/10W

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

MD-B **MD-B HX PRO** **SW-A** **SW-B**

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV11B	1-238-012-11	RES, ADJ, CARBON 1K	
RV12	1-238-551-11	RES, ADJ, CARBON 220K (H2700, H3700:AEP)	
RV21B	1-238-012-11	RES, ADJ, CARBON 1K	
RV22	1-238-551-11	RES, ADJ, CARBON 220K (H2700, H3700:AEP)	
RV71B	1-238-016-11	RES, ADJ, CARBON 10K	
RV72B	1-238-016-11	RES, ADJ, CARBON 10K	
RV81	1-241-122-11	RES, ADJ, CARBON 22K (H3700:UK, G)	
RV91	1-241-122-11	RES, ADJ, CARBON 22K (H3700:UK, G)	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY31	1-515-726-11	RELAY	

< TRANSFORMER >

Ref. No.	Part No.	Description	Remark
T51	1-406-419-11	COIL, BIAS OSCILLATION (H2700, H3700:AEP)	
T51	1-406-417-11	COIL, BIAS OSCILLATION (H3700:UK, G)	
T81	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR (H3700:UK, G)	
T91	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR (H3700:UK, G)	

< TEST PIN >

Ref. No.	Part No.	Description	Remark
* TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P (H3700:UK, G)	

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Ref. No.	Part No.	Description	Remark
*	1-634-841-14	SW-A BOARD **********	
	3-343-419-01	HOLDER (S SENSER A)	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	

< IC >

Ref. No.	Part No.	Description	Remark
IC81A	8-719-710-03	DIODE NJL5165K-B	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	

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Ref. No.	Part No.	Description	Remark
*	1-634-841-14	SW-B BOARD **********	
	3-343-419-01	HOLDER (S SENSER A)	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P	

< IC >

Ref. No.	Part No.	Description	Remark
IC81B	8-719-710-03	DIODE NJL5165K-B	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R81	1-249-414-11	CARBON 560 5% 1/4W	
R82	1-247-818-11	CARBON 300 5% 1/4W	
R83	1-247-834-11	CARBON 1.3K 5% 1/4W	
R84	1-249-417-11	CARBON 1K 5% 1/4W	
R85	1-249-408-11	CARBON 180 5% 1/4W	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)	
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)	
S83	1-571-281-21	SWITCH, LEAF (METAL DET)	
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF SIDE A)	
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF SIDE B)	
S86	1-571-281-21	SWITCH, LEAF (HALF DET)	

****

MISCELLANEOUS
****

Ref. No.	Part No.	Description	Remark
* 17	1-573-188-11	CONNECTOR, BRIDGE 7P	
* 18	1-573-389-11	COONECTOR, BRIDGE 8P	
69	1-590-902-11	WIRE, FLAT TYPE (9 CORE)	
70	1-590-903-11	WIRE, FLAT TYPE (15 CORE)	
71	1-590-904-11	WIRE, FLAT TYPE (12 CORE)	
117	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
HP101	A-2003-868-A	BASE ASSY, HEAD (DECK A)	
HRP101	A-2003-838-A	BASE ASSY, HEAD (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTOR ASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	

****

Ref. No.	Part No.	Description	Remark
		***************************	
		HARDWARE LIST	
		***************************	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-621-255-15	SCREW +PTT 2X3 (S)	
#3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#4	7-621-770-67	SCREW +PTT 2.6X6 (S)	
#5	7-627-556-08	SCREW +P 2.6X2.8	
#6	7-621-775-00	SCREW +B 2.6X3	
#7	7-682-547-04	SCREW +BVTT 3X6 (S)	
#8	7-621-849-00	SCREW, TAPPING	

9-957-110-11

Sony Corporation
Audio Group

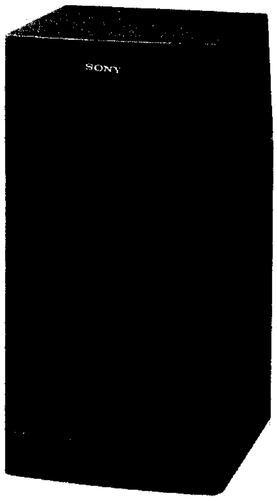
English
92D0469-1
Printed in Japan
© 1992. 4

Published by Customer Relations and Service Group

SS-H3700

SERVICE MANUAL

AEP Model
UK Model

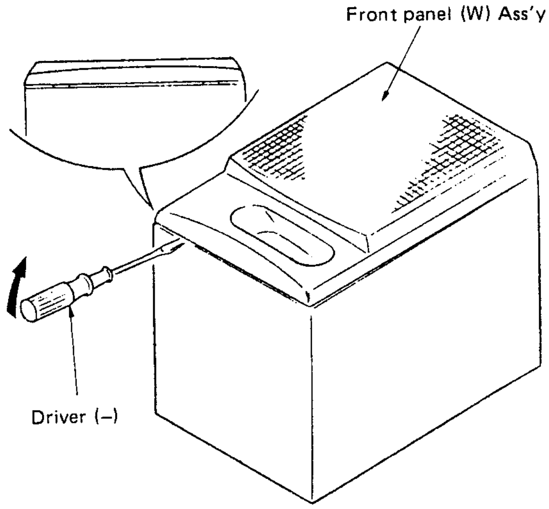


This set is the speaker system in MHC-3700.

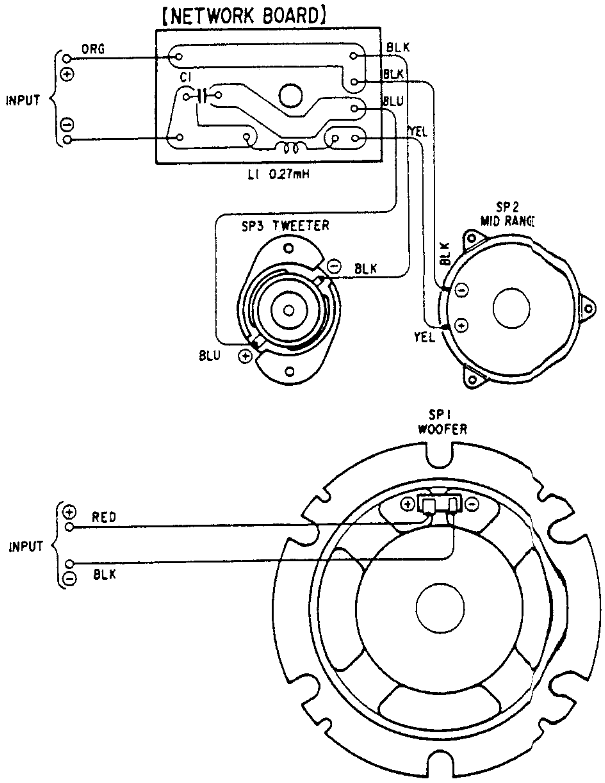
SPECIFICATIONS

Speaker system	3-way dual enclosure type
High pass speaker section	
Spekaer units	Mid-range: 80mm cone type Tweeter: 25mm Balance drive type
Nominal impedance	8Ω
Power handling capacity	Maximum input power 40W
Dimensions	Approx. 185x115x225mm (w/h/d)
Weight	Approx. 1.7g (1)
Low pass speaker section	
Speaker units	Woofer: 140mm cone type
Nominal impedance	6Ω
Power handling capacity	Maxmum input power 60W
Dimensions	Approx. 185x250x225mm (w/h/d)
Weight	Approx. 3.2kg (1)

1. FRONT PANEL (W) ASSY REMOVAL


Front panel (W) Ass'y
Driver (–)

2. LEAD WIRES ARRANGEMENT


(NETWORK BOARD)
ORG
INPUT
⊕
⊖
C1
L1 0.27mH
BLK
BLK
BLU
YEL
SP3 TWEETER
⊖ BLK
BLU ⊕
SP2
MID RANGE
BLK
YEL
SP1
WOOFER
⊕ RED
INPUT
⊖ BLK

SPEAKER SYSTEM

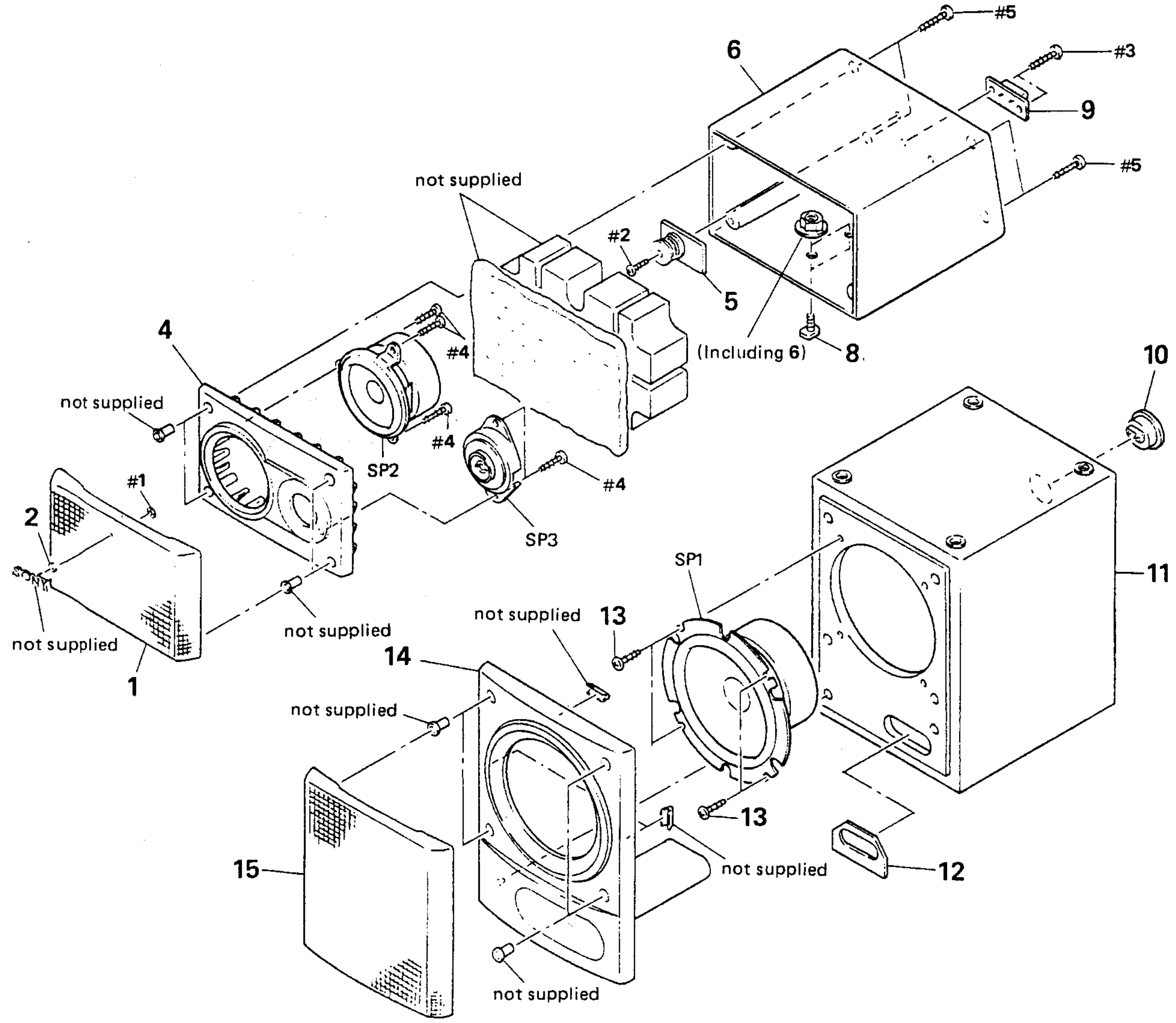
SONY®

MICROFILM

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref.No.	Part.No.	Description	Remarks
1	X-4942-200-1	FRAME (S) ASSY, GRILLE	
2	3-701-437-21	WASHER	
4	X-4942-201-1	PANEL (S) ASSY, FRONT	
* 5	1-589-388-11	MOUNTED PC BOARD (NETWORK)	
6	X-4942-202-1	CABINET (S) ASSY, SPEAKER	
8	4-928-613-21	NUT, STAND FIXED	
9	1-537-337-31	TERMINAL BOARD (2P·SP)	
10	1-537-332-12	TERMINAL BOARD	
11	X-4942-392-1	CABINET (W)(R) ASSY, SPEAKER (AEP,UK,IT)	
11	X-4942-396-1	CABINET (W)(R) ASSY, SPEAKER (GERMANY)	
11	X-4942-393-1	CABINET (W)(L) ASSY, SPEAKER (AEP,UK,IT)	
11	X-4942-397-1	CABINET (W)(L) ASSY, SPEAKER (GERMANY)	
* 12	4-949-397-01	PACKING (D)	
13	4-874-614-01	SCREW (4)(3.5x14), TAPPING	
14	X-4942-211-2	PANEL (W)(R) ASSY, FRONT	
14	X-4942-215-2	PANEL (W)(L) ASSY, FRONT	
15	X-4942-203-1	FRAME (W) ASSY, GRILLE	

Ref.No.	Part.No.	Description	Remarks
SP1	1-544-724-21	SPEAKER (13cm)	
SP2	1-544-723-11	SPEAKER (8cm)	
SP3	1-544-722-11	SPEKAER (2.5cm)	
	ACCESSORY & PACKING MATERIAL		
	3-694-922-01	SEET, PROTECTION	
	3-755-033-11	MANUAL, INSTRUCTION (ENGLISH, FRANCH, SPANISH, PORTUGUESE, GERMAN, DUTCH, SWEDISH, ITALIAN)	
	4-945-080-01	CUSHION	
	1-590-855-31	CORD, SPEAKER	
	HARDWARE LIST *************		
#1	7-624-200-11	NUT, PUSH 2	
#2	7-685-165-01	SCREW +PTP 4x25 TYPE 1	
#3	7-685-647-19	SCREW +BVTP 3x10 TYPE 2 N-S	
#4	7-685-660-79	SCREW +BVTP 4x10 TYPE 2 IT-3	
#5	7-685-663-79	SCREW +BVTP 4x16 TYPE 2 IT-3	

Sony Corporation
Audio Group

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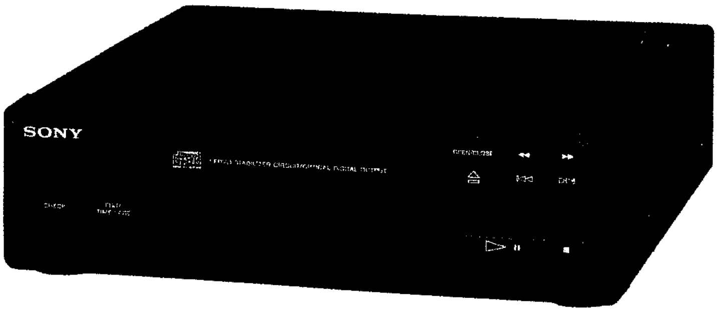
Published by Customer Relations and Service Group

CDP-H3700

SERVICE MANUAL

AEP Model
UK Model



This set is the CD player section in MHC-2700/3700.

Model Name Using Similar Mechanism	CDP-H3600
CD Mechanism Type	CDM13BA-5BD3
Optical Pick-Up Block Type	BU-5BD3

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	2 V (at 50 kilohms)
Load impedance	More than 10 kilohms
Outputs	DIGITAL OUT OPTICAL (optical output connector): wave length 660 nm, output level −18 dBm

Design and specifications subject to change without notice.

For the United Kingdom and European countries.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

COMPACT DISC PLAYER

SONY®

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

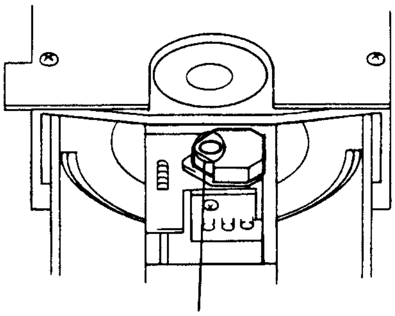
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential diference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.

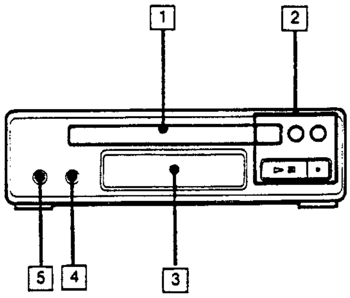


- Confirm that laser beam is spread.
- Up and down motion of the objective lens. (3 times)

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION



1 Disc tray
2 CD operation buttons
  ≙ : OPEN/CLOSE
  ▷II : Play/pause
  ■: Stop
  ◀◀ I◁◁ ▷▷I ▶▶ : Manual search (when kept depressed)/Automatic Music Sensor (when pressed)
3 Display window
4 EDIT/TIME FADE button (80) (92)
5 CHECK button

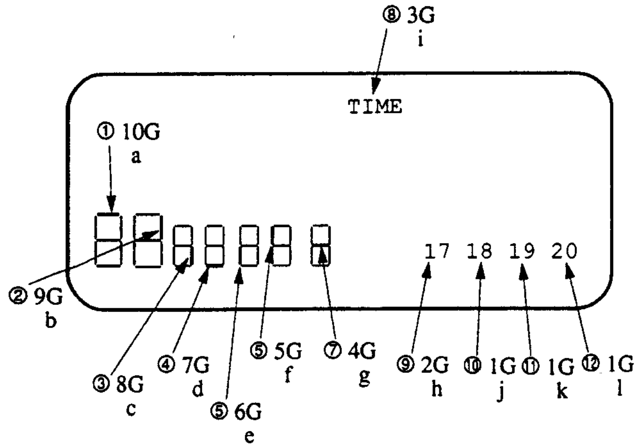
SECTION 2
TEST MODES

2-1. Test Mode of Display Microcomputer (IC401)

Connect Pin ㉝ of IC401 to ground and turn ON the POWER switch, thus you can test the following 3 tests.

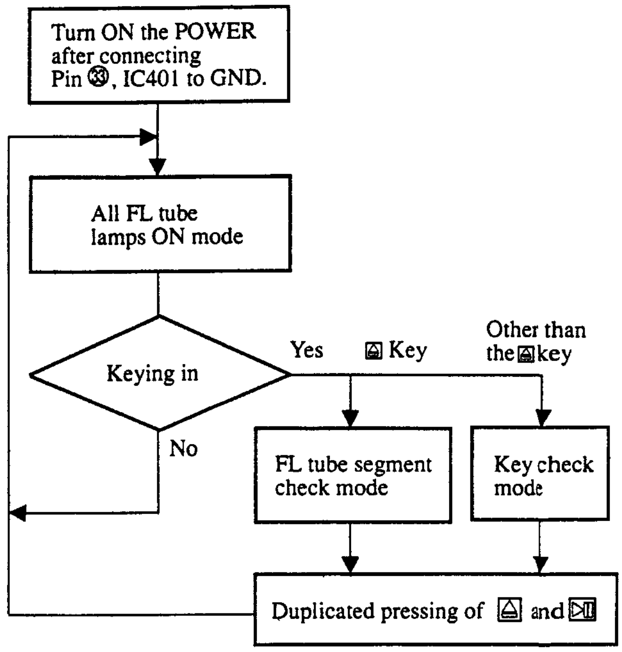
(1) All FL tube ON
This mode is actuated immediately after turning ON the POWER switch.

(2) FL tube segment check
This mode is actuated by pressing the ⏏ key in the state of (1). Every time the ⏏ key is pressed, the segments are indicated sequentially from the segment a. When the last l segment is displayed, keying in is no longer accepted while continuing the lighting-up state of the last segment. Conditions are normal provided all lamps light up in the following order.


⑧ 3G
i
TIME
① 10G
a
② 9G
b
③ 8G
c
④ 7G
d
⑤ 6G
e
⑤ 5G
f
⑦ 4G
g
17
18
19
20
⑨ 2G
h
⑩ 1G
j
⑪ 1G
k
⑫ 1G
l

(3) KEY check
This mode is effected by pressing the ⏏ key in the state of (1), while indicating "1." Every time a new key is pressed subsequently, the indicated number is incremented. Conditions are normal provided "7" is indicated when all types of keys are pressed. Even if a key is pressed again, it is not counted.

* To leave the mode (2) or (3), press the ⏏ and ▷II keys in duplication, thereby the mode returning to all ON mode.


Turn ON the POWER after connecting Pin ㉝, IC401 to GND.
All FL tube lamps ON mode
Keying in
Yes
⏏ Key
Other than the ⏏ key
No
FL tube segment check mode
Key check mode
Duplicated pressing of ⏏ and ▷II

2-2. Test Modes of CD System Controller (IC202)

(1) ADJUST mode
When this mode is effected, the machine is operated normally except for the following.

- When pin ⑲, IC201 (ADJ) is set to "L" after turning ON the POWER switch:

1. GFS is no longer monitored during PLAY, PAUSE or SEARCH, while not stopping even with GFS remaining still at "L" (NG).
2. No high-speed feeding is activated during SEARCH.
3. Focus gain is reset to normal gain during PLAY (normally, the gain is lowered to reduce noise when FOCUS is locked).

- When Pin ⑬, IC201 (AFADJ) is set to "L" after turning ON the POWER switch:

1. Regardless of Pin ⑲ (ADJ) of the CLV-S fixed function, the CLV mode during PLAY becomes CLV-S (rough servo) only while Pin e remains "L".

(2) AFADJUST mode
In this mode, it is possible to check the interface between the display micon (IC401) and CD syscon (IC201).

- Set Pin ⑬, IC201 (AFADJ) to "L" before turning ON the POWER switch.

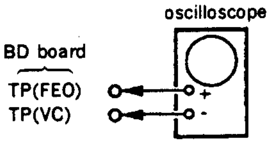
1. Every time the ⏏ key is pressed after turning On the POWER switch, indication on the FL tube is switched correspondingly. Conditions are normal provided the indication repeats the 4 patterns including all lamp ON.

SECTION 3
ELECTRICAL BLOCK CHECKING

Note:

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

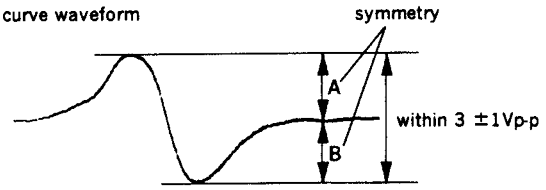
S Curve Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure:

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

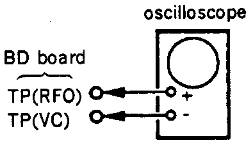
S curve waveform


symmetry
A
B
within 3 ±1Vp-p

5. After check, remove the lead wire connected in step 2.

Note:
- Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check


oscilloscope
BD board
TP(RFO)
TP(VC)
+
-

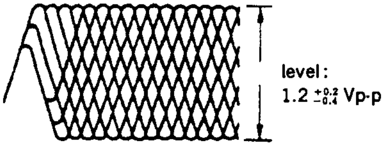
Procedure:

1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

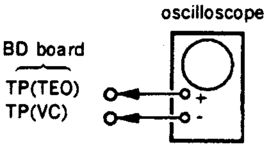
Note:

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform


VOLT/DIV: 200mV
TIME/DIV: 500nS
level:
1.2 $^{+0.2}_{-0.4}$ Vp-p

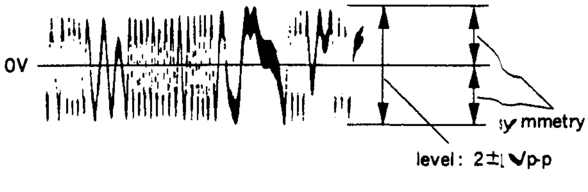
E-F Balance Check


oscilloscope
BD board
TP(TEO)
TP(VC)
+
-

Procedure:

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse oscilloscope

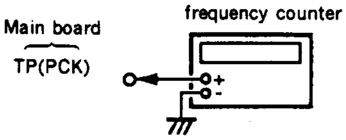

0V
symmetry
level: 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.


Main board
TP(PCK)
frequency counter
+
-

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

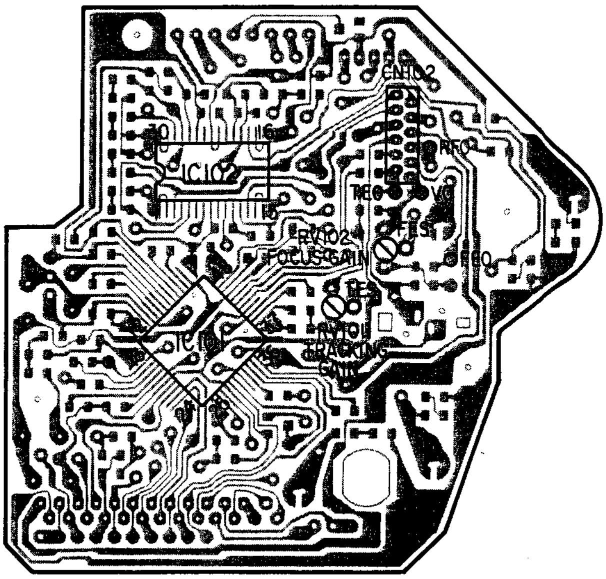
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

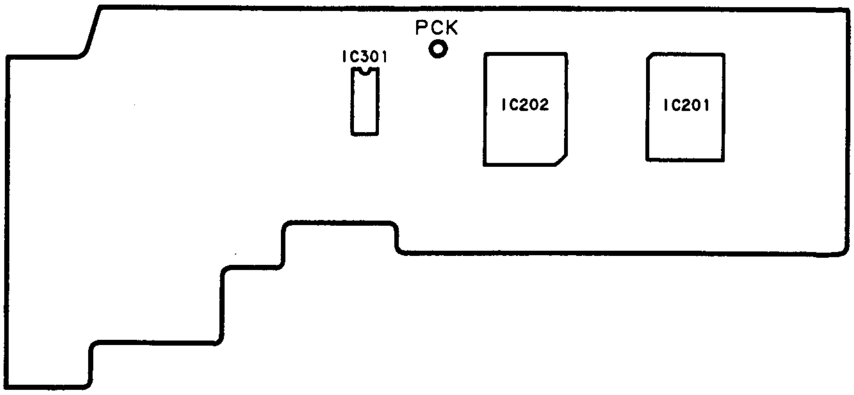
Checking Location :

【BD Board】

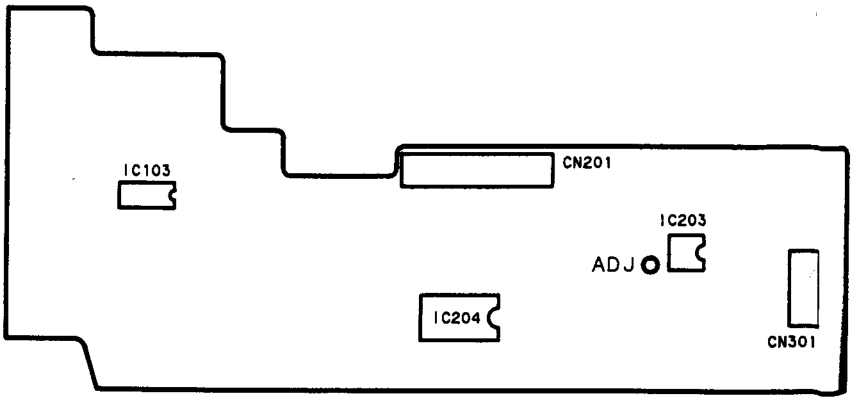
—Conductor Side—


CN102
10
16
IC102
15
RFO
TEO
VC
FES
RV102
FOCUS GAIN
FEO
TES
RV101
TRACKING
GAIN
IC101

【MAIN Board】 —Component Side—


PCK
IC301
IC202
IC201

【MAIN Board】 —Conductor Side—


IC103
CN201
IC203
ADJ
IC204
CN301

SECTION 4
DIAGRAMS

4-1. PIN DESCRIPTION

• IC201 CD System Controller (μPD75116GF-F21-3BE)

Functions effected by the captioned controller include IC101 (RF signal processing, servo), IC202 (DSP, digital filter) and loading control in the CD unit, data exchange with IC401 (display controller), audio bus entry, etc.

Pin No.	Pin Name	I/O	Description
1-2	G MUTE, GCLR	O	Not in use with the model (open).
3	DPCLK	O	Display data transfer clock output to IC401 (display micon)
4-6		O	IC204 (CXD2554M) control output.
7	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
8	X2	I	Clock input
9	X1	I	Clock input (4 MHz)
10	DFCT SW	O	DEFECT circuit ON/OFF switching output of IC101 (CXA1372Q). It is turned OFF ("H") to focus-search the DISC flaw detection circuit.
11	AMUTE	O	Muting control output. "H": Mute
12	BSOUT	O	Audio bus output
13	AFADJ	I	Test mode input. Various test operations are effected upon "L" after turning ON the POWER.
14	LDON	O	Optical pickup laser diode ON/OFF switching output. "H": ON
15	XLT	O	Serial data latch output to IC202 (CXD2500AQ)
16	CLK	O	Serial data transfer clock output to IC202 (CXD2500AQ)
17	DATA	O	Serial data output to IC202 (CXD2500AQ)
18	MODE	I	Not in use with the model (GND)
19	ADJ	I	Test mode input. Upon "L," GFS checking is disabled while continuously rotating the spindle no matter whether frame synch is issued during PLAY, PAUSE or SEARCH.
20	GFS	I	GFS signal input from IC202 (CXD2500AQ). "L": NG "H": OK
21	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "H": OK
22 - 23		O	Not in use with the model (open)
24	LODOUT	O	Output to rotate M291 (loading motor) in the loading out direction. *1
25	LODIN	O	Output to rotate M291 (loading motor) in the loading in direction. *1
26	V_{SS}	–	Power terminal (GND)
27	$\overline{\text{IN SW}}$	I	S292 (Loading in switch) input
28	$\overline{\text{OUT SW}}$	I	S291 (Loading out switch) input
29	KEY REQ	I	Key data request input from IC401 (display controller)
30	BS IN	I	Audio bus input
31 - 36			Not in use with the model (GND)
37	SENS	I	SENS input from IC101 (CXA1372Q) and IC202 (CXD2500AQ)
38	$\overline{\text{TIMER}}$	I	Not in use with the model (pull up)
39	D/F 16BIT	I	IC202 (CXD2500AQ) digital filter mode setting input. It is fixed at 16 bit, 4fs with
		I	the model (pull up).
40			Not in use with the model (GND)
41	SUBQ	I	Subcode Q data input from IC202 (CXD2500AQ)
42		O	Not in use with the model (open)
43	SQCLK	O	Subcode Q data readout clock output to IC202 (CXD2500AQ)
44	SCOR	I	Subcode sync S0 + S1 detection input from IC202 (CXD2500AQ)
45 - 56		O	Not in use with the model (open)
57	N.C.	I	Not in use with the model (+5V)
58	V_{DD}	–	Power terminal (+5V)
59 - 62	DPDATA3-0	I/O	Key data input and display data output with IC401 (display controller)
63 - 64		O	Not in use with the model (open)

*1 Loading motor control

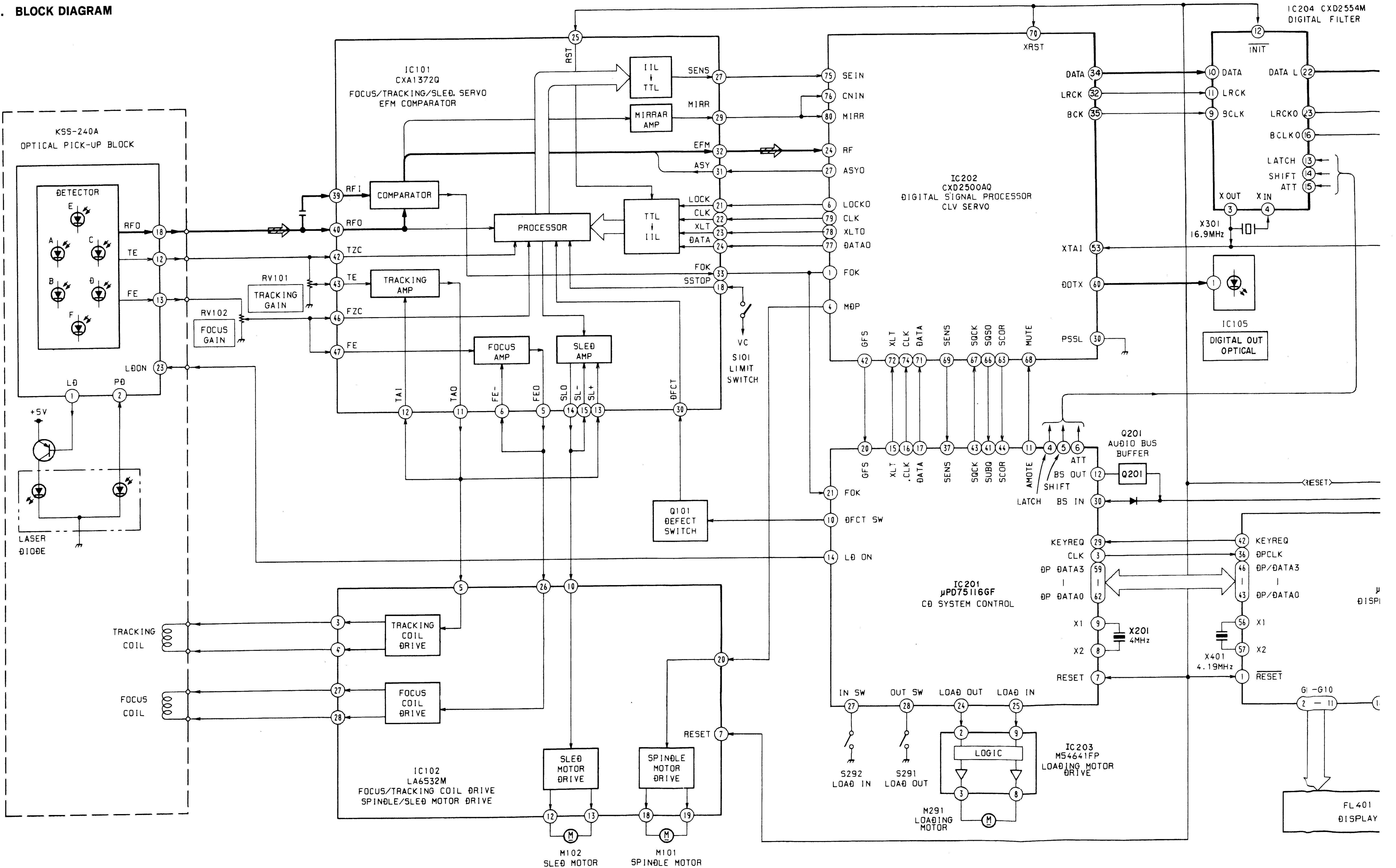
	IN	OUT	BRAKE
LODOUT ㉔	L	H	H
LODIN ㉕	H	L	H

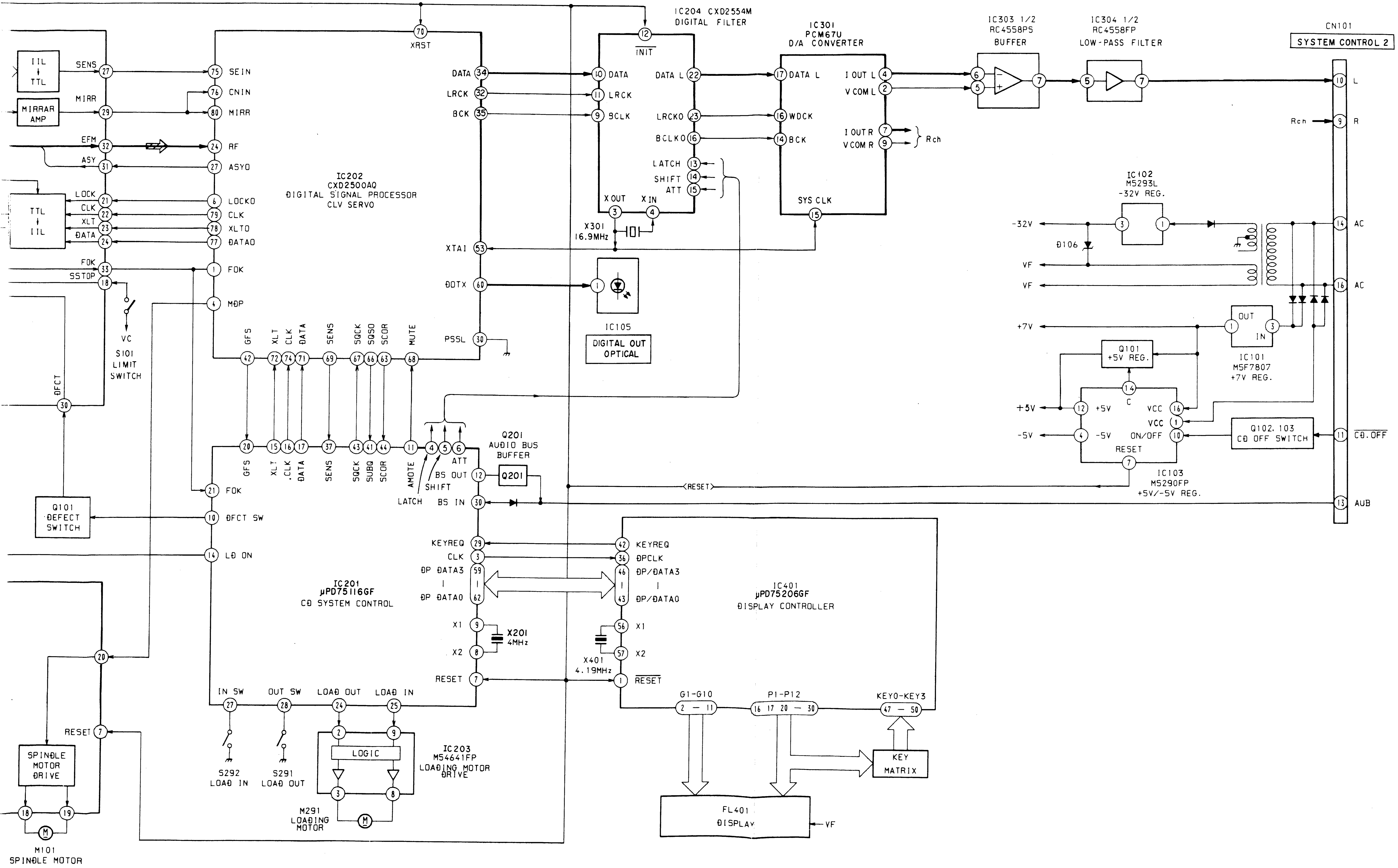
• IC401 Display controller (μPD75206GF-716-3BE)

In charge of displaying the FL tube and keying in, it exchanges data with the IC201 (CD system controller) in 4-bit parallel mode.

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{RESET}}$	I	System reset input. "L": Reset
2 - 11	G1-10	O	Digital output to the FL tube
12 - 15		O	Not in use with the model (open)
16, 17	l, k	O	FL tube segment output
18	VLOAD	–	Power supply for the FL tube controller (builtin) (-32V)
19	VPRE	–	Power supply for the FL tube predriver (-3.5V)
20 - 25	j ~ e	O	FL tube segment output
26	VDD	–	Power terminal (+5V)
27, 28	d, c	O	FL tube segment output
29, 30	b, a	O	FL tube segment, key scan output
31, 32		I	Not in use with the model (GND)
33	$\overline{\text{TEST}}$	I	Test mode input. "L": Test mode
34	SELECT	I	Not in use with the model (pull up)
35	BSIN	I	Not in use with the model (pull up)
36	DPCLK	I	Display data transfer clock input from IC201 (CD system controller)
37, 38		I	Not in use with the model (pull up)
39		O	Not in use with the model (pull up)
40, 41		O	Not in use with the model (open)
42	KEY REQ	O	Key data request output to IC201 (CD system controller)
43 - 46	DPDATA0-3	I/O	Key data output and display data input with IC201 (CD system controller)
47 - 50	KEY0-3	I	Key data input
51, 52		I	Not in use with the model (pull up)
53, 54		I	Not in use with the model (GND)
55		O	Not in use with the model (open)
56	X1	I	System clock input (4.19 MHz)
57	X2	I	System clock input
58	Vss	–	Power supply terminal (GND)
59		I	Not in use with the model (GND)
60 - 64		O	Not in use with the model (open)

4-2. BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER DIODE
TRACKING COIL
FOCUS COIL
RV101
TRACKING GAIN
RV102
FOCUS GAIN
IC101
CXA1372Q
FOCUS/TRACKING/SLED. SERVO
EFM COMPARATOR
RST
IIL ↓ TTL
MIRRAR AMP
SENS
MIRR
EFM
ASY
RFI
RFO
COMPARATOR
PROCESSOR
TTL ↓ IIL
LOCK
CLK
XLT
DATA
FOK
SSTOP
TZC
TE
TRACKING AMP
FZC
FE
FOCUS AMP
SLED AMP
TAI
TAO
FE-
FEO
SLO
SL-
SL+
DFCT
VC
S101
LIMIT SWITCH
Q101
DEFECT SWITCH
IC102
LA6532M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
TRACKING COIL DRIVE
FOCUS COIL DRIVE
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
RESET
M
M102
SLED MOTOR
M101
SPINDLE MOTOR
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
DATA
LRCK
BCK
XTAI
DOTX
PSSL
IC204 CXD2554M
DIGITAL FILTER
INIT
DATA
LRCK
BCLK
DATA L
LRCKO
BCLKO
LATCH
SHIFT
ATT
XOUT
XIN
X301
16.9MHz
IC105
DIGITAL OUT OPTICAL
Q201
AUDIO BUS BUFFER
Q201
GFS
XLT
.CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMUTE
ATT
BS OUT
SHIFT
LATCH
BS IN
RESET
FOK
DFCT SW
LD ON
IC201
μPD75116GF
CD SYSTEM CONTROL
KEYREQ
CLK
DP DATA3
|
DP DATA0
X1
X2
X201
4MHz
RESET
KEYREQ
DPCLK
DP/DATA3
|
DP/DATA0
X1
X2
X401
4.19MHz
RESET
G1-G10
2 — 11
FL401
DISPLAY
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC203
M54641FP
LOADING MOTOR DRIVE
M291
LOADING MOTOR
μ
DISP


IIL → TTL
SENS
MIRRAR AMP
MIRR
EFM
ASY
TTL → IIL
LOCK
CLK
XLT
DATA
FOK
SSTOP
VC
S101 LIMIT SWITCH
DFCT
Q101 DEFECT SWITCH
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
IC202 CXD2500AQ DIGITAL SIGNAL PROCESSOR CLV SERVO
DATA
LRCK
BCK
XTAI
DOTX
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
IC204 CXD2554M DIGITAL FILTER
INIT
DATA
LRCK
BCLK
DATA L
LRCKO
BCLKO
LATCH
SHIFT
ATT
X OUT
X IN
X301 16.9MHz
IC105 DIGITAL OUT OPTICAL
IC301 PCM67U D/A CONVERTER
DATA L
WDCK
BCK
I OUT L
V COM L
I OUT R
V COM R
Rch
SYS CLK
IC303 1/2 RC4558PS BUFFER
IC304 1/2 RC4558FP LOW-PASS FILTER
CN101 SYSTEM CONTROL 2
L
Rch
R
AC
AC
AUB
CD.OFF
IC102 M5293L -32V REG.
-32V
D106
VF
VF
+7V
OUT
IN
IC101 M5F7807 +7V REG.
Q101 +5V REG.
+5V
-5V
+5V
-5V
VCC
VCC
ON/OFF
RESET
C
Q102, 103 CD OFF SWITCH
IC103 M5290FP +5V/-5V REG.
RESET
GFS
XLT
CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMUTE
ATT
BS OUT
SHIFT
LATCH
BS IN
Q201 AUDIO BUS BUFFER
Q201
FOK
DFCT SW
LD ON
IC201 µPD75116GF CD SYSTEM CONTROL
KEYREQ
CLK
DP DATA3 | DP DATA0
X1
X2
X201 4MHz
RESET
IN SW
OUT SW
LOAD OUT
LOAD IN
S292 LOAD IN
S291 LOAD OUT
LOGIC
IC203 M54641FP LOADING MOTOR DRIVE
M291 LOADING MOTOR
M
RESET
SPINDLE MOTOR DRIVE
M
M101 SPINDLE MOTOR
KEYREQ
DPCLK
DP/DATA3 | DP/DATA0
X1
X2
X401 4.19MHz
RESET
IC401 µPD75206GF DISPLAY CONTROLLER
G1-G10
P1-P12
KEY0-KEY3
KEY MATRIX
FL401 DISPLAY
VF

• Semiconductor Location
Except BD Board

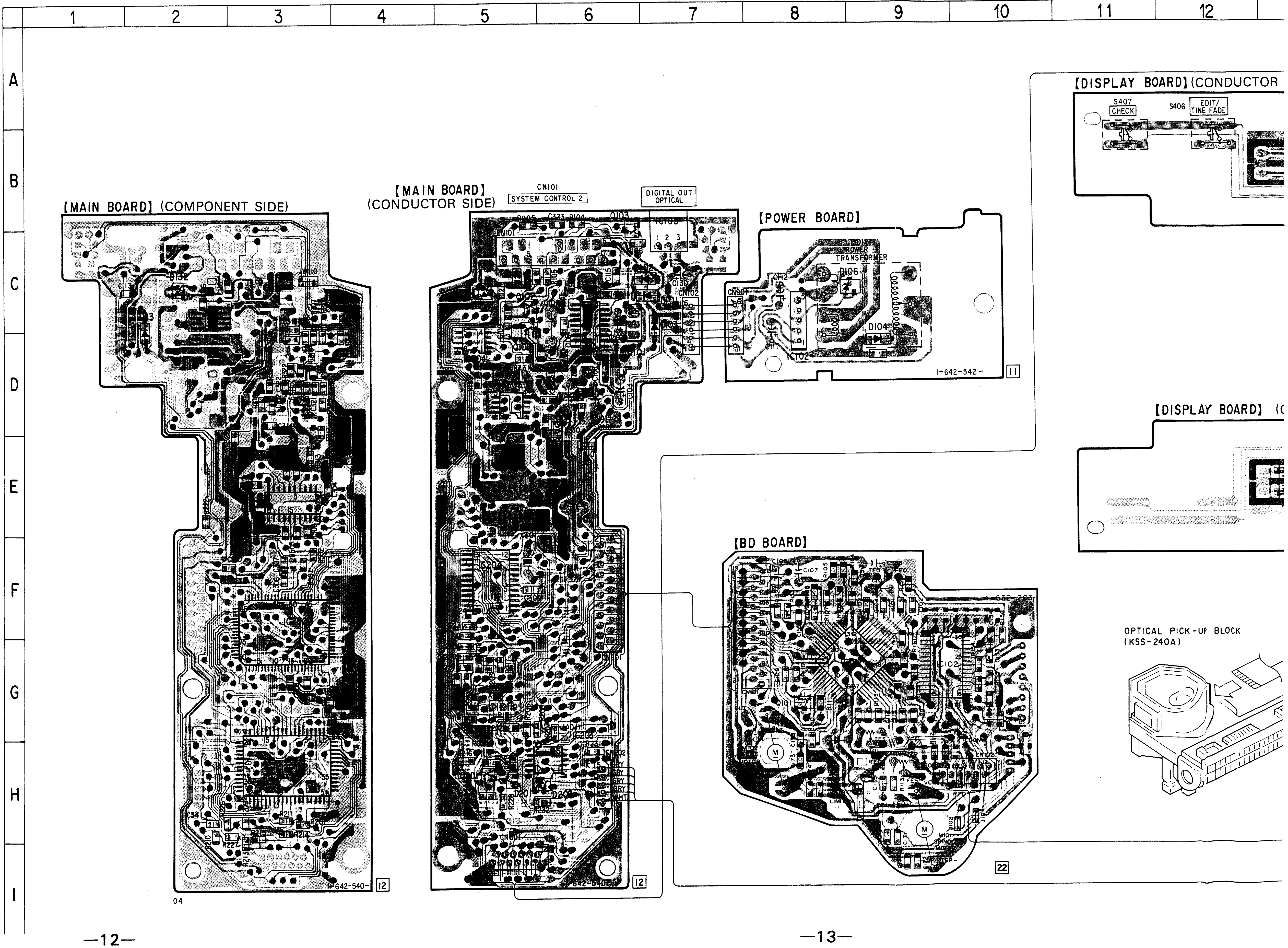
Ref. No.	Location
D101	C-7
D102	C-6
D103	C-7
D104	D-9
D106	C-8
D113	C-2
D131	C-5
D132	C-2
D201	H-5
D206	H-6
D401	E-15
D402	E-18
D403	E-14
IC101	D-6
IC102	C-8
IC103	D-6
IC105	B-7
IC201	H-3
IC202	F-3
IC203	H-6
IC204	F-5
IC301	E-3
IC303	D-5
IC304	D-5
IC401	E-14
Q101	D-5
Q102	C-5
Q103	B-6
Q201	H-5

BD Board

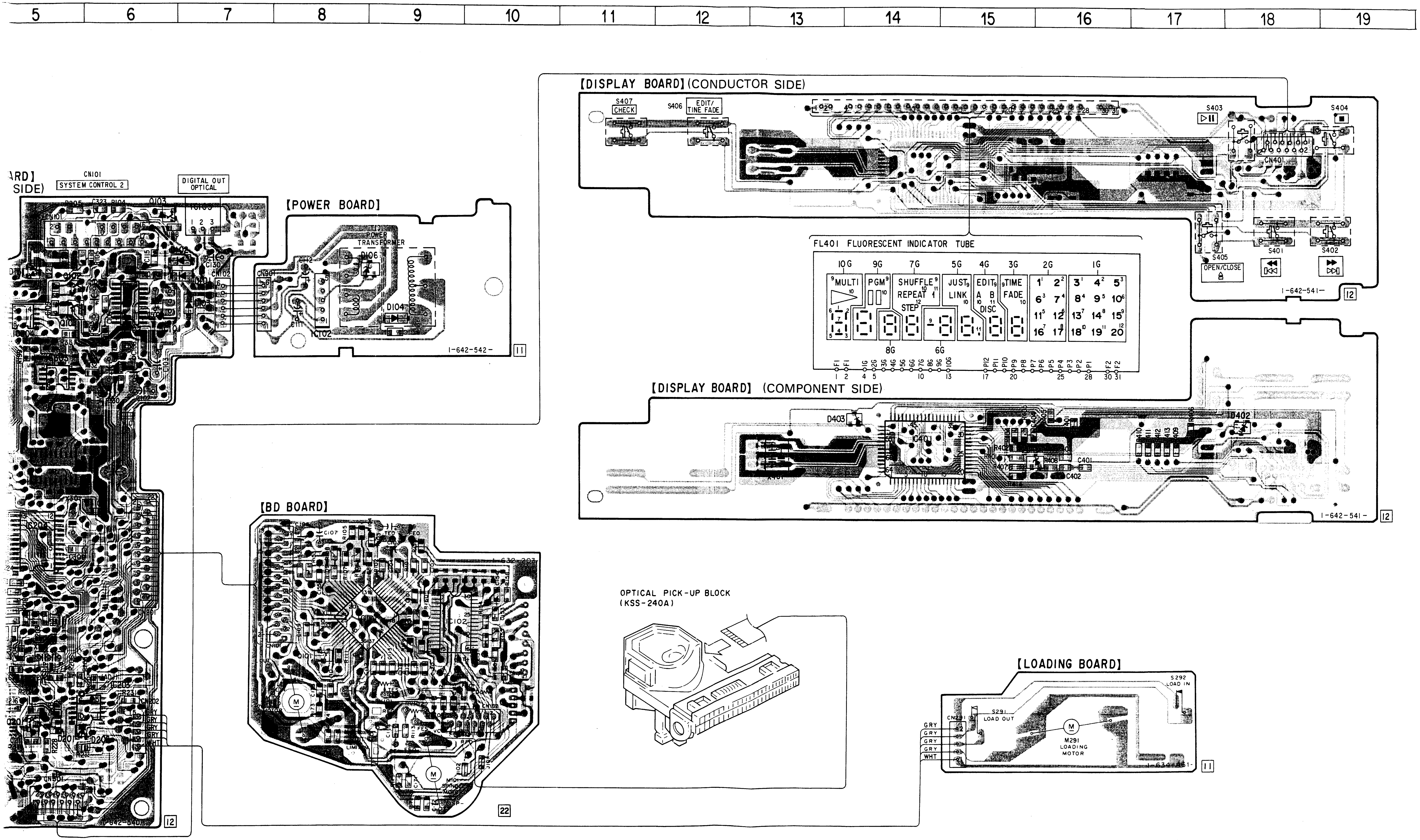
Ref. No.	Location
IC101	G-8
IC102	G-9
Q101	G-8

Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

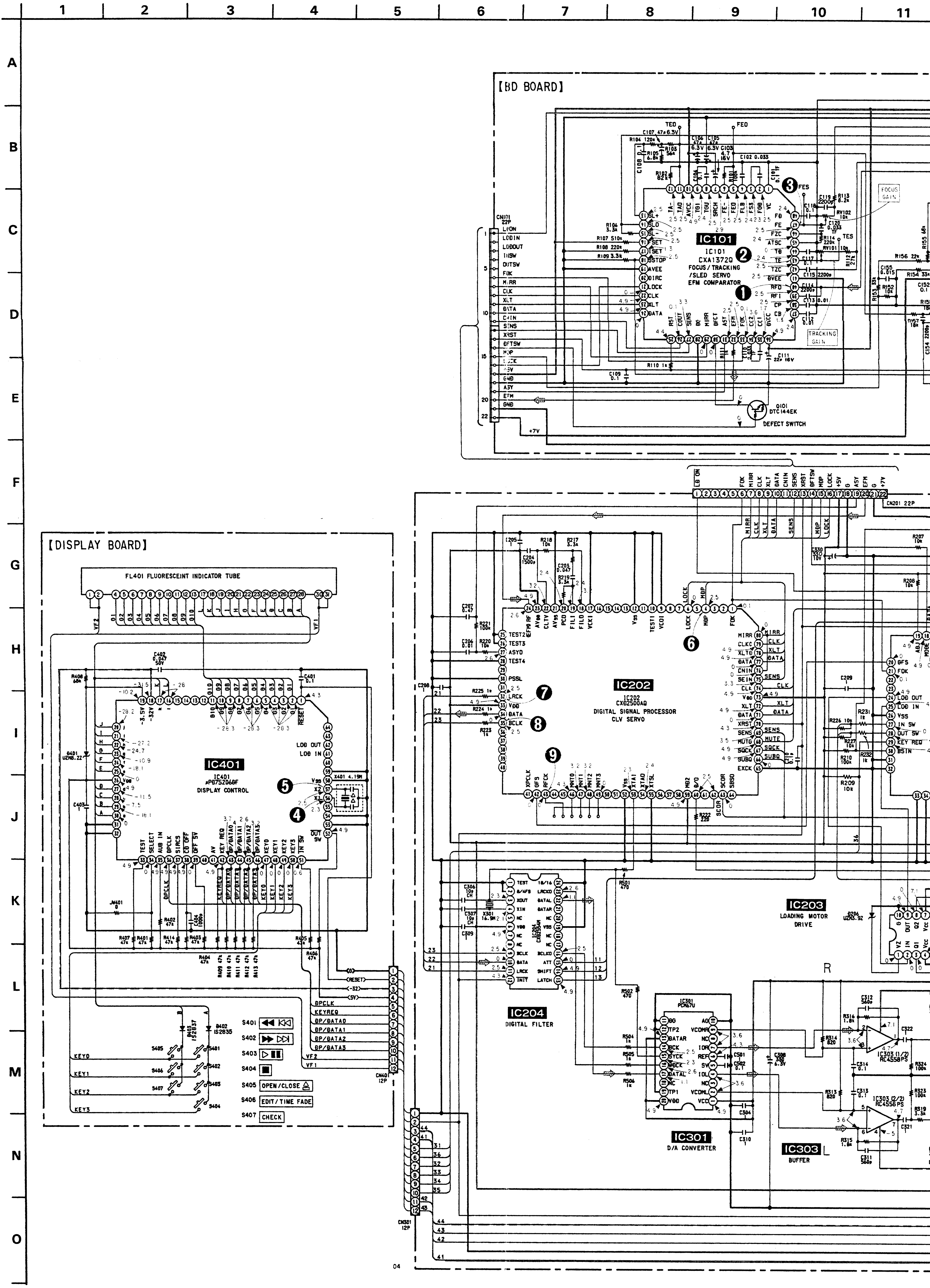
4-3. PRINTED WIRING BOARDS • Refer to page 22 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
[MAIN BOARD] (COMPONENT SIDE)
[MAIN BOARD] (CONDUCTOR SIDE)
CN101
SYSTEM CONTROL 2
DIGITAL OUT OPTICAL
[POWER BOARD]
POWER TRANSFORMER
D106
D104
IC102
1-642-542-
11
[DISPLAY BOARD] (CONDUCTOR
S407 CHECK
S406 EDIT/ TINE FADE
[DISPLAY BOARD] (C
[BD BOARD]
OPTICAL PICK-UP BLOCK (KSS-240A)
1-642-540-
12
22
04

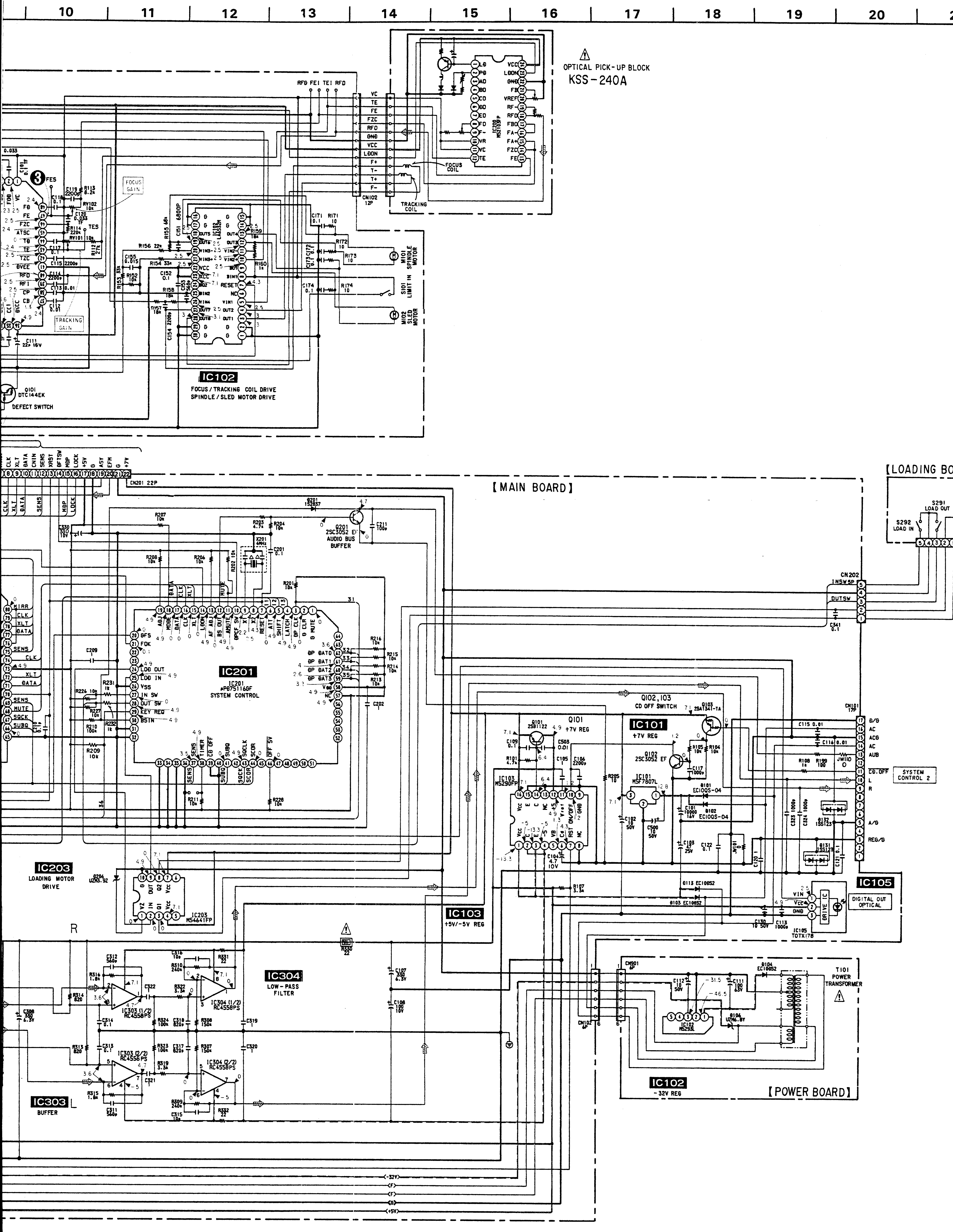
-ead Layouts.

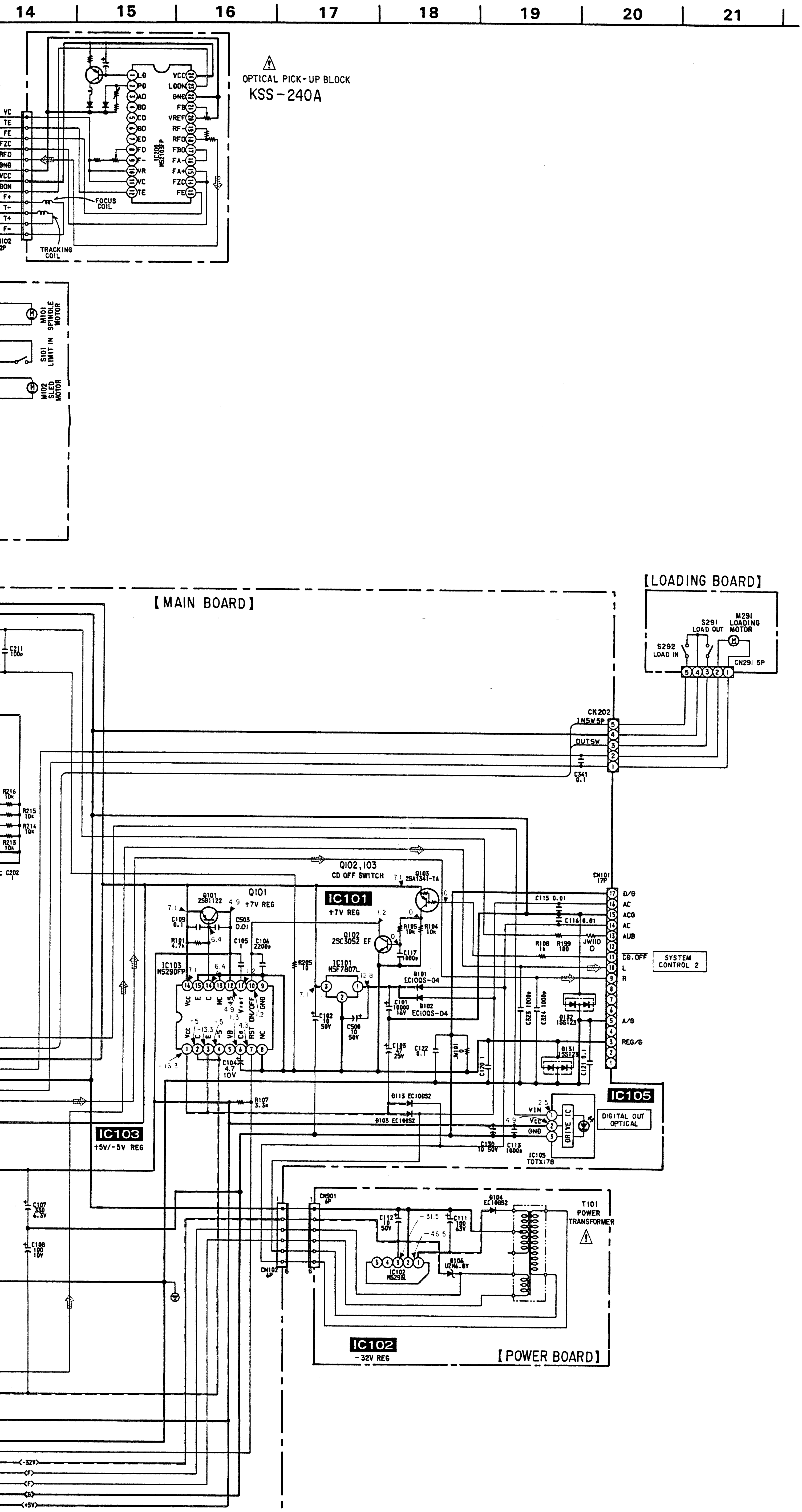

5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
ARD]
SIDE)
CN101
SYSTEM CONTROL 2
DIGITAL OUT
OPTICAL
[POWER BOARD]
T101
POWER
TRANSFORMER
D106
D104
CN901
IC102
1-642-542-
11
[DISPLAY BOARD] (CONDUCTOR SIDE)
S407
CHECK
S406
EDIT/
TINE FADE
S403
S404
CN401
S405
OPEN/CLOSE
S401
S402
1-642-541-
12
FL401 FLUORESCENT INDICATOR TUBE
10G
9G
7G
5G
4G
3G
2G
1G
MULTI
PGM
SHUFFLE
REPEAT
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
8G
6G
[DISPLAY BOARD] (COMPONENT SIDE)
D403
IC401
D402
C401
C402
1-642-541-
12
[BD BOARD]
IC102
IC101
M101
SPINDLE MOTOR
22
OPTICAL PICK-UP BLOCK
(KSS-240A)
[LOADING BOARD]
S292
LOAD IN
CN291
S291
LOAD OUT
M291
LOADING
MOTOR
GRY
GRY
GRY
GRY
WHT
1-634-461-
11
1-642-540-
12

4-4. SCHEMATIC DIAGRAM • Refer to page 19 for IC Block Diagrams.

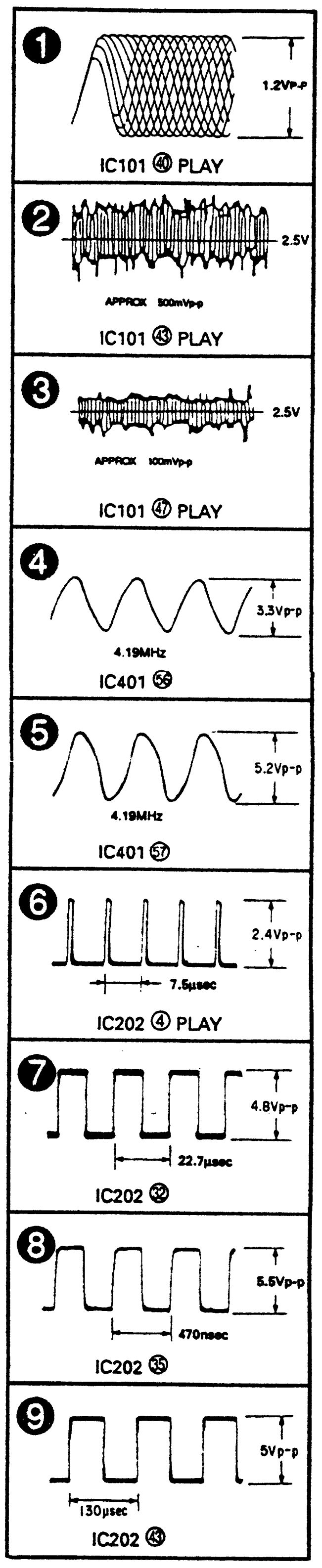


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
【BD BOARD】
IC101
CXA1372Q
FOCUS/TRACKING
/SLED SERVO
EFM COMPARATOR
FOCUS GAIN
TRACKING GAIN
CN101 22P
Q101 DTC144EK
DEFECT SWITCH
TEO
FEO
FES
TES
+7V
【DISPLAY BOARD】
FL401 FLUORESCEINT INDICATOR TUBE
IC401
μPD7520066F
DISPLAY CONTROL
X401 4.19M
LOD OUT
LOD IN
CN201 22P
IC202
CXD2500AQ
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC203
LOADING MOTOR
DRIVE
IC204
DIGITAL FILTER
IC301
D/A CONVERTER
IC303
BUFFER
IC303 (1/2) RC4558PS
IC303 (2/2) RC4558PS
R
L
S401
S402
S403
S404
S405 OPEN/CLOSE
S406 EDIT/TIME FADE
S407 CHECK
KEY0
KEY1
KEY2
KEY3
D402 1S2835
D403 1S2837
CN401 12P
CN301 12P
X301 16.9M
04


10
11
12
13
14
15
16
17
18
19
20
OPTICAL PICK-UP BLOCK
KSS-240A
IC200 M52109FP
FOCUS COIL
TRACKING COIL
CN102 12P
RFO FEI TEI RFO
VC
TE
FE
FZC
RFO
GND
VCC
LDON
F+
T-
T+
F-
FOCUS GAIN
TRACKING GAIN
FES
IC102
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
M101 SPINDLE MOTOR
S101 LIMIT IN
M102 SLED MOTOR
Q101 DTC144EK
DEFECT SWITCH
CN201 22P
[MAIN BOARD]
[LOADING BO
S291 LOAD OUT
S292 LOAD IN
CN202 INSW 5P
OUTSW
Q201 1SS837
Q201 2SC3052 EF
AUDIO BUS BUFFER
X201 4MHz
IC201
IC201 μPD75116GF
SYSTEM CONTROL
IC203
LOADING MOTOR DRIVE
IC203 M54641FP
Q102,103
CD OFF SWITCH
Q101
+7V REG
IC101
+7V REG
Q101 2SB1122
Q102 2SC3052 EF
Q103 2SA1341-TA
IC101 M5F7807L
IC103 M5290FP
IC103
+5V/-5V REG
CN101 17P
CD.OFF
SYSTEM CONTROL 2
IC105
DIGITAL OUT OPTICAL
IC105 TOTX178
R
L
IC304
LOW-PASS FILTER
IC303 (1/2) RC4558PS
IC303 (2/2) RC4558PS
IC304 (1/2) RC4558PS
IC304 (2/2) RC4558PS
IC303
BUFFER
CN901 6P
CN102 6P
T101 POWER TRANSFORMER
IC102 M5293L
IC102
-32V REG
[POWER BOARD]
-32V
+5V


14
15
16
17
18
19
20
21
OPTICAL PICK-UP BLOCK
KSS-240A
FOCUS COIL
TRACKING COIL
M101 SPINDLE MOTOR
S101 LIMIT IN
M102 SLED MOTOR
[MAIN BOARD]
[LOADING BOARD]
S291 LOAD OUT
M291 LOADING MOTOR
S292 LOAD IN
CN291 5P
CN202 INSW 5P
OUTSW
Q102,103 CD OFF SWITCH
Q101 +7V REG
IC101 +7V REG
IC103 M5290FP
IC103 +5V/-5V REG
IC101 M5F7807L
SYSTEM CONTROL 2
IC105 DIGITAL OUT OPTICAL
IC105 TOTX178
T101 POWER TRANSFORMER
IC102 M5293L
IC102 -32V REG
[POWER BOARD]

• **Waveforms**



Note:

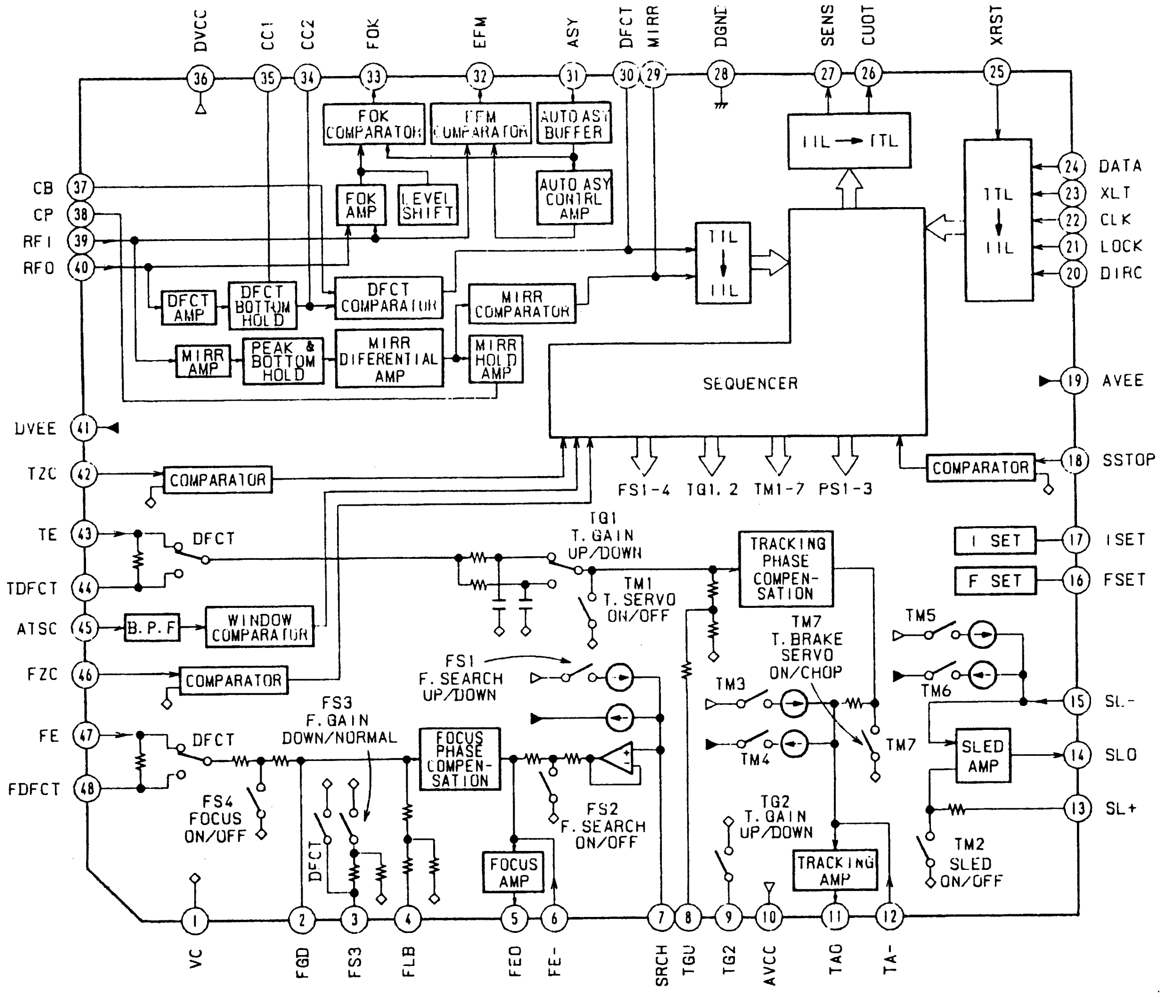
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

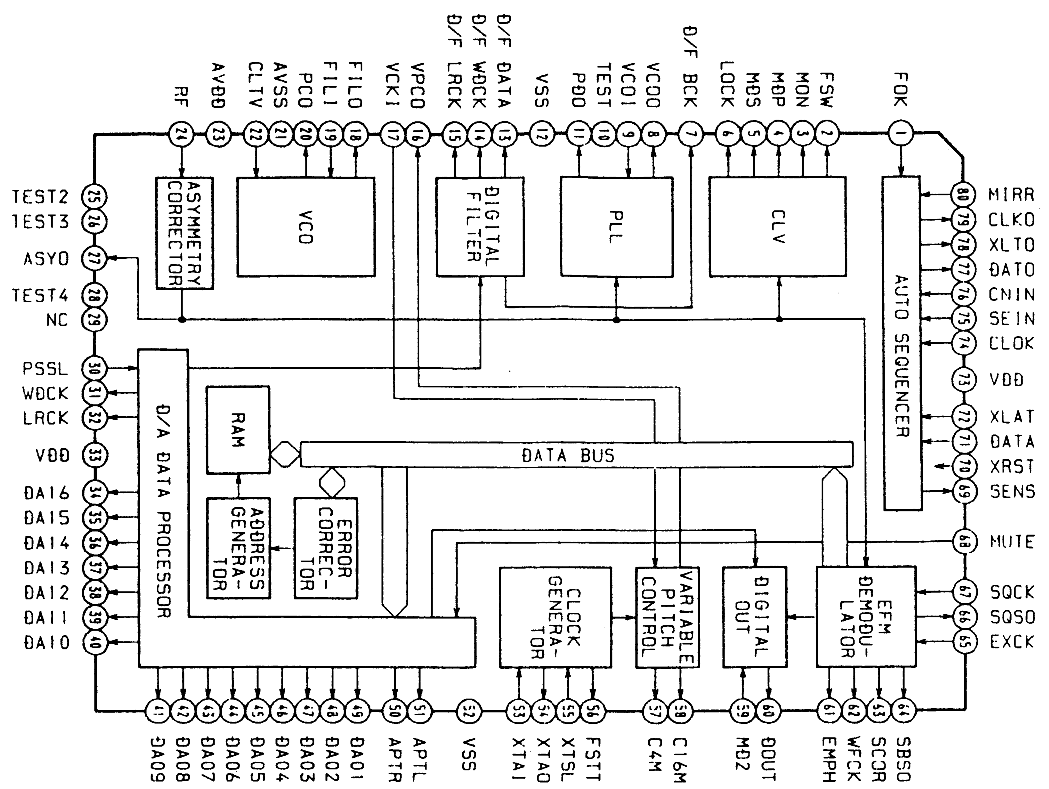
- ━━ : B+ Line
- ━ ━ : B– Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- **Signal path.**
  ⇨ : CD

• IC Block Diagrams

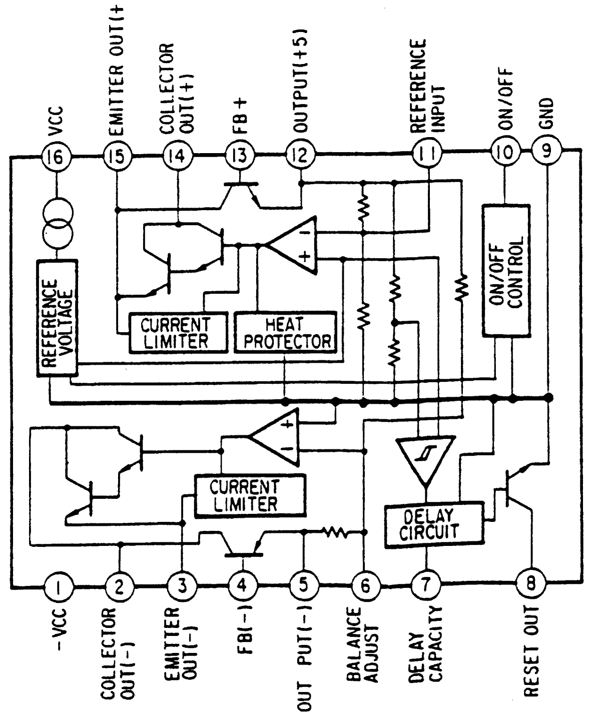
IC101 CXA1372Q (BD Board)


DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
FOK AMP
LEVEL SHIFT
AUTO ASY CONTROL AMP
IIL → ITL
ITL ↓ IIL
IIL ↓ IIL
DATA
XLT
CLK
LOCK
DIRC
CB
CP
RFI
RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
AVEE
DVEE
TZC
COMPARATOR
SSTOP
FS1-4 TG1, 2 TM1-7 PS1-3
TE
DFCT
TG1 T. GAIN UP/DOWN
TM1 T. SERVO ON/OFF
TRACKING PHASE COMPEN-SATION
I SET
F SET
ISET
FSET
TDFCT
ATSC
B.P.F
WINDOW COMPARATOR
TM7 T. BRAKE SERVO ON/CHOP
TM5
TM6
FZC
FS1 F. SEARCH UP/DOWN
TM3
SL-
FS3 F. GAIN DOWN/NORMAL
FE
FOCUS PHASE COMPEN-SATION
TM4
TM7
SLED AMP
SLO
FDFCT
FS4 FOCUS ON/OFF
FS2 F. SEARCH ON/OFF
FOCUS AMP
TG2 T. GAIN UP/DOWN
TRACKING AMP
TM2 SLED ON/OFF
SL+
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGU
TG2
AVCC
TAO
TA-

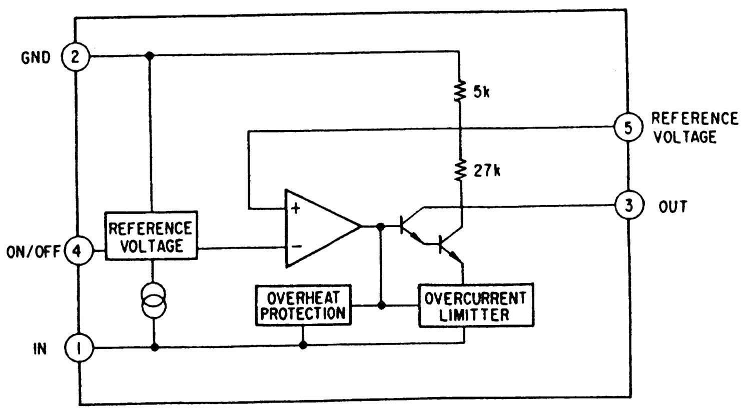
IC202 CXD2500AQ


RF
AVDD
CLTV
AVSS
PCO
FILI
FILO
VPCO
VCKI
D/F LRCK
D/F WDCK
D/F DATA
VSS
PDO
TEST
VCOI
VCOO
D/F BCK
LOCK
MDS
MDP
MON
FSW
FOK
TEST2
TEST3
ASYO
TEST4
NC
ASYMMETRY CORRECTOR
VCO
DIGITAL FILTER
PLL
CLV
AUTO SEQUENCER
MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10
D/A DATA PROCESSOR
RAM
ADDRESS GENERATOR
ERROR CORRECTOR
DATA BUS
CLOCK GENERATOR
VARIABLE PITCH CONTROL
DIGITAL OUT
EFM DEMODULATOR
MUTE
SQCK
SQSO
EXCK
DA09
DA08
DA07
DA06
DA05
DA04
DA03
DA02
DA01
APTR
APTL
VSS
XTAI
XTAO
XTSL
FSTT
C4M
C16M
MD2
DOUT
EMPH
WFCK
SCOR
SBSO

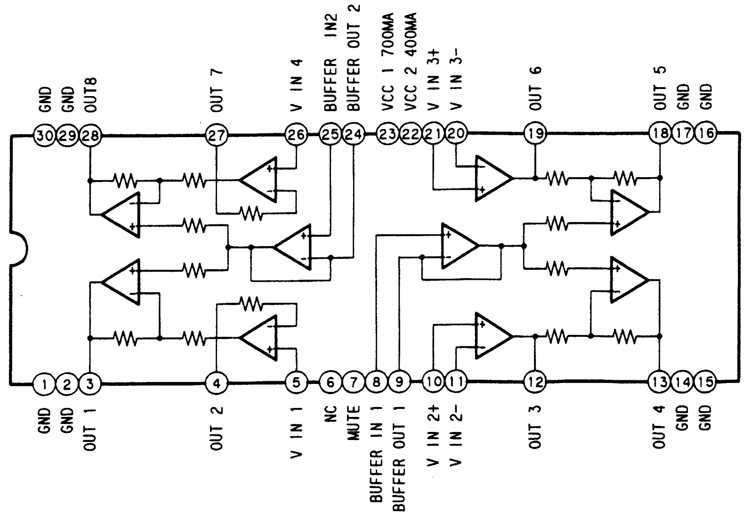
IC103 M5290FP


VCC
EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
REFERENCE VOLTAGE
CURRENT LIMITER
HEAT PROTECTOR
ON/OFF CONTROL
CURRENT LIMITER
DELAY CIRCUIT
-VCC
COLLECTOR OUT(-)
EMITTER OUT(-)
FB(-)
OUT PUT(-5)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT

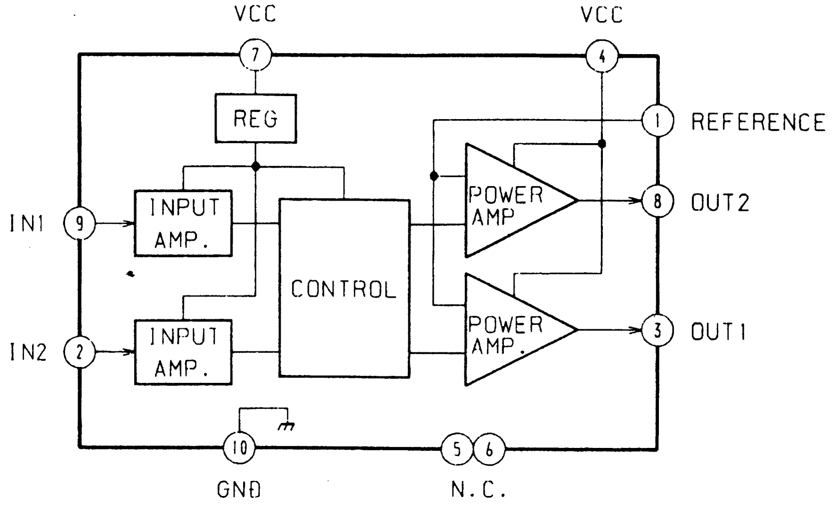
IC102 M5293L (Power Board)


GND
5k
REFERENCE VOLTAGE
27k
OUT
ON/OFF
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN

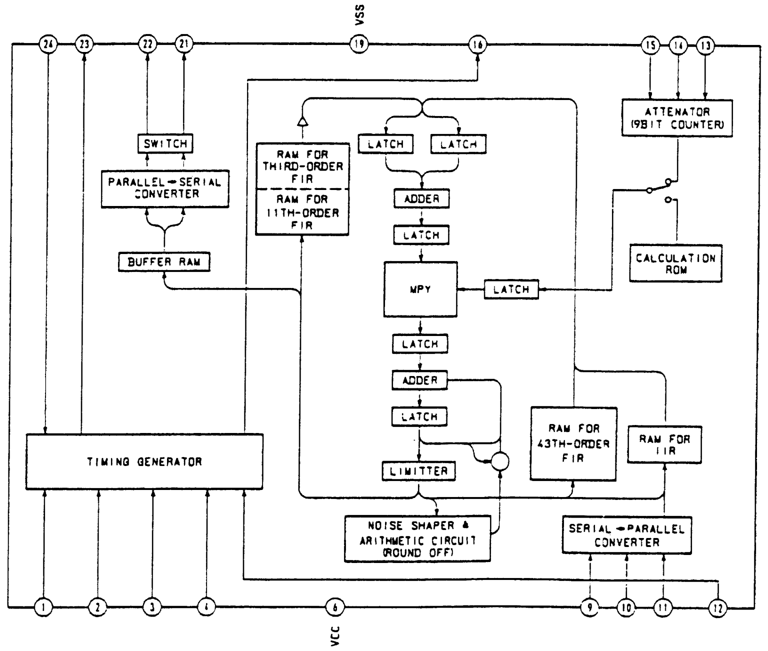
IC102 LA6532M (BD Board)


GND
GND
OUT8
OUT 7
V IN 4
BUFFER IN2
BUFFER OUT 2
VCC 1 700MA
VCC 2 400MA
V IN 3+
V IN 3-
OUT 6
OUT 5
GND
GND
GND
GND
OUT 1
OUT 2
V IN 1
NC
MUTE
BUFFER IN 1
BUFFER OUT 1
V IN 2+
V IN 2-
OUT 3
OUT 4
GND
GND

IC203 M54641FP

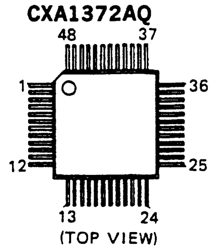

VCC
VCC
7
4
REG
1
REFERENCE
IN1
9
INPUT AMP.
CONTROL
POWER AMP
8
OUT2
IN2
2
INPUT AMP.
POWER AMP.
3
OUT1
10
GND
5
6
N.C.

IC204 CXD2554M


VSS
24
23
22
21
19
18
15
14
13
SWITCH
PARALLEL→SERIAL CONVERTER
BUFFER RAM
RAM FOR THIRD-ORDER FIR
RAM FOR 11TH-ORDER FIR
LATCH
LATCH
ADDER
LATCH
MPY
LATCH
ATTENUATOR (9BIT COUNTER)
CALCULATION ROM
LATCH
ADDER
LATCH
LIMITTER
RAM FOR 43TH-ORDER FIR
RAM FOR IIR
TIMING GENERATOR
NOISE SHAPER & ARITHMETIC CIRCUIT (ROUND OFF)
SERIAL→PARALLEL CONVERTER
1
2
3
4
5
9
10
11
12
VCC

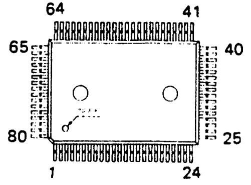
4-5. SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ


48
37
1
36
12
25
13
24

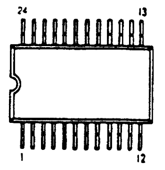
(TOP VIEW)

CXD2500AQ


64
41
65
40
80
25
1
24

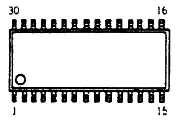
MARKING SIDE VIEW

CXD2554M



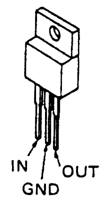
(TOP VIEW)

LA6532M

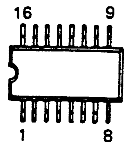


(TOP VIEW)

M5F7807

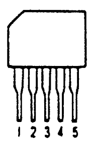


M5290FP

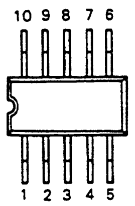


(TOP VIEW)

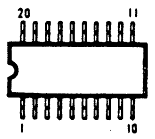
M5293L



M54641FP

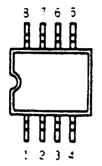

10 9 8 7 6
1 2 3 4 5

PCM67U



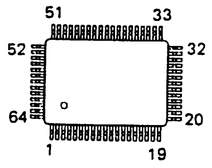
(TOP VIEW)

RC4558PS



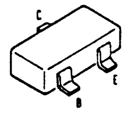
(TOPVIEW)

**μPD75116GF
-F21-3BE
μPD75206GF
-716-3BE**

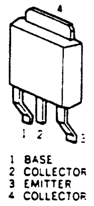

51
33
52
32
64
20
1
19

(TOP VIEW)

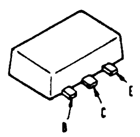
**DTC144EK
2SC3052-EF**



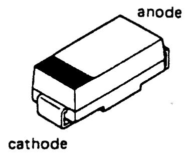
2SA1341


4
1 2 3
1 BASE
2 COLLECTOR
3 EMITTER
4 COLLECTOR

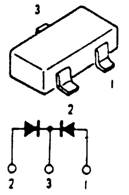
2SB1122-S



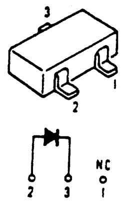
**EC10DS2
EC10QS-04**


anode
cathode

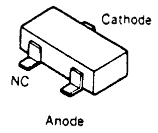
MA152WK



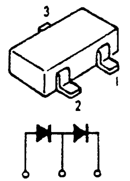
**UZM3.9Z
UZM6.8Y**



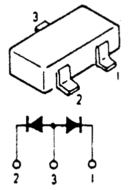
UZM8.2Z


Cathode
NC
Anode

1SS226



1S2836



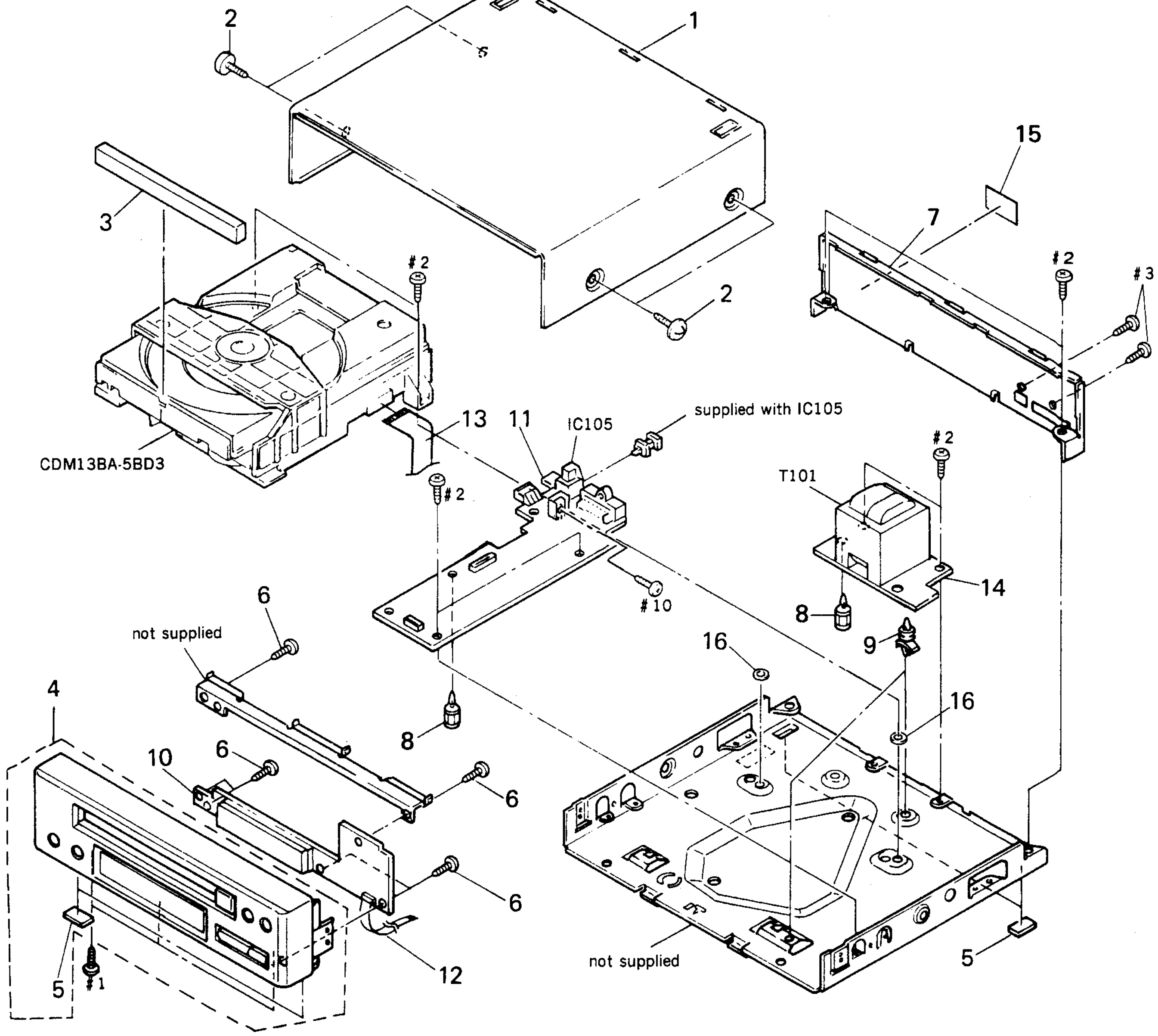
SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ Parts Color ↑ Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

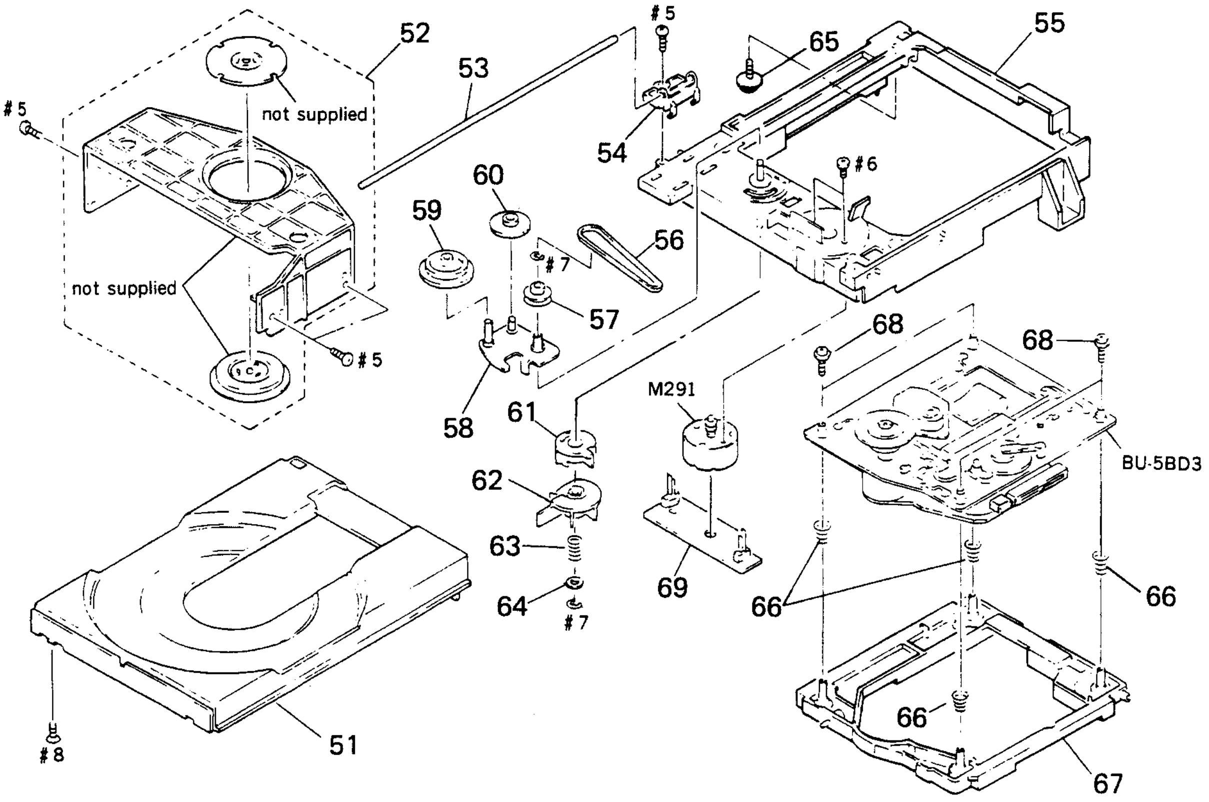
5-1. CHASSIS



Ref. No.	Part No.	Description	Remark
* 1	4-944-423-31	CASE (K206522)	
2	3-363-099-01	SCREW (CASE +3X8 TP2)	
3	4-948-777-01	PANEL, LOADING	
4	X-4942-117-1	PANEL ASSY, FRONT	
5	4-930-336-21	FOOT (FELT)	
6	4-951-620-01	SCREW (2.6X8), +BVTP	
* 7	4-948-753-11	PANEL (CDP), BACK	
* 8	3-669-610-00	SPACER	
* 9	4-924-098-11	HOLDER, PC BOARD	

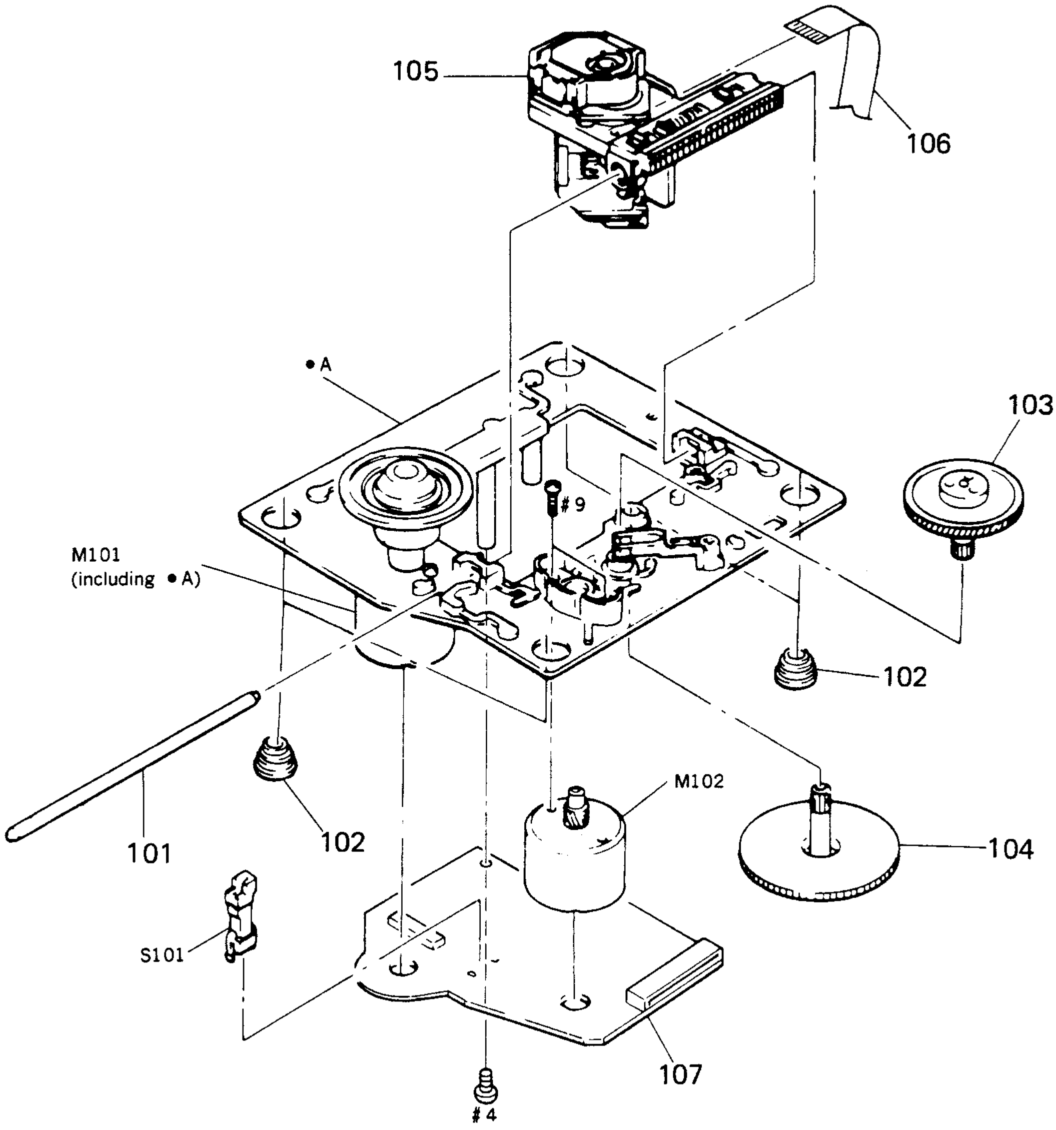
Ref. No.	Part No.	Description	Remark
* 10	A-4649-273-A	DISPLAY BOARD, COMPLETE	
* 11	A-4649-275-A	MOUNTED PCB, MAIN	
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
* 14	1-642-542-11	POWER BOARD	
* 15	4-941-548-01	LABEL, CLASS 1	
16	3-555-872-00	SPACER	
IC105	8-749-923-04	IC TOTX178	
⚠T101	1-450-704-11	TRANSFORMER, POWER	

5-2. CD BLOCK (CDM13BA-5BD3)


#5
52
53
#5
not supplied
54
55
65
#6
60
59
56
#7
57
not supplied
#5
58
61
62
63
64
#7
M291
68
68
BU-5BD3
66
69
66
66
67
51
#8

Ref. No.	Part No.	Description	Remark
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-01	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
* 65	4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 69	1-634-461-11	LOARDING BOARD	
M291	A-4608-362-A	MOTOR (L) ASSY	

5-3. OPTICAL PICK-UP BLOCK (BU-5BD3)



Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	4-917-567-01	GEAR (M)	
104	4-917-564-01	GEAR (P), FLATNESS	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	

Ref. No.	Part No.	Description	Remark
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
* 107	A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	MOTOR ASSY, SPINDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

BD

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: μF
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: μH
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD....

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
*	A-4617-371-A	BD BOARD, COMPLETE ******************			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-053-73	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
		< JUMPER RESISTOR >			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description			Remark
RV101	1-238-016-11	RES. ADJ. CARBON 10K			
RV102	1-238-016-11	RES. ADJ. CARBON 10K			

< SWITCH >

Ref. No.	Part No.	Description			Remark
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			

****

Ref. No.	Part No.	Description			Remark
*	A-4649-273-A	DISPLAY BOARD, COMPLETE ************************			
*	A-4649-275-A	MAIN BOARD, COMPLETE ********************			
*	1-642-542-11	POWER BOARD ***********			
*	4-880-403-11	HEAT SINK			
*	4-932-810-11	CUSHION (FL)			
	7-682-548-04	SCREW +BVTT 3X8 (S)			

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C101	1-126-939-11	ELECT	10000uF	20%	16V
C102	1-124-907-11	ELECT	10uF	20%	50V
C103	1-124-477-11	ELECT	47uF	20%	25V
C104	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C105	1-164-346-11	CERAMIC CHIP	1uF		16V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-124-442-00	ELECT	330uF	20%	6.3V
C108	1-124-443-00	ELECT	100uF	20%	10V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C111	1-126-063-11	ELECT	100uF	20%	63V
C112	1-124-907-11	ELECT	10uF	20%	50V
C113	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C115	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C116	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C117	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C120	1-164-346-11	CERAMIC CHIP	1uF		16V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C122	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C130	1-124-907-11	ELECT	10uF	20%	50V
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C204	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C207	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C211	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C304	1-164-346-11	CERAMIC CHIP	1uF		16V
C306	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C307	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C308	1-124-442-00	ELECT	330uF	20%	6.3V
C309	1-162-638-11	CERAMIC CHIP	1uF		16V
C310	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C312	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C313	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C314	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C315	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C316	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C317	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C318	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C320	1-164-346-11	CERAMIC CHIP	1uF		16V
C321	1-164-346-11	CERAMIC CHIP	1uF		16V
C322	1-164-346-11	CERAMIC CHIP	1uF		16V
C323	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C324	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C330	1-124-442-00	ELECT	330uF	20%	10V
C341	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C401	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C402	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C403	1-164-346-11	CERAMIC CHIP	1uF		16V
C404	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C500	1-124-907-11	ELECT	10uF	20%	50V
C501	1-164-346-11	CERAMIC CHIP	1uF		16V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C503	1-163-031-11	CERAMIC CHIP	0.01uF		50V

< CONNECTOR >

Ref. No.	Part No.	Description			Remark
* CN101	1-569-624-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)			
CN102	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P			
* CN201	1-568-822-11	SOCKET, CONNECTOR 22P			
* CN202	1-564-339-00	PIN, CONNECTOR 5P			
* CN301	1-573-099-11	HOUSING, CONNECTOR 12P			
* CN401	1-573-098-11	HOUSING, CONNECTOR 12P			
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P			

< DIODE >

Ref. No.	Part No.	Description			Remark
D101	8-719-210-39	DIODE	EC10QS-04		
D102	8-719-210-39	DIODE	EC10QS-04		
D103	8-719-210-33	DIODE	EC10DS2		
D104	8-719-210-33	DIODE	EC10DS2		
D106	8-719-021-59	DIODE	UZM6.8Y		
D113	8-719-210-33	DIODE	EC10DS2		
D131	8-719-800-76	DIODE	1SS226		
D132	8-719-800-76	DIODE	1SS226		

DISPLAY MAIN POWER

Ref. No.	Part No.	Description	Remark
D201	8-719-400-18	DIODE MA152WK	
D206	8-719-021-13	DIODE UZM3.9Z	
D401	8-719-021-77	DIODE UZM8.2Z	
D402	8-719-104-34	DIODE 1S2836	
D403	8-719-400-18	DIODE MA152WK	
		< INDICATOR >	
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC101	8-759-604-86	IC M5F7807	
IC102	8-759-633-42	IC M5293L	
IC103	8-759-636-24	IC M5290FP	
IC105	8-749-923-04	IC TOTX178	
IC201	8-759-059-86	IC uPD75116GF-F21-3BE	
IC202	8-752-337-26	IC CXD2500AQ	
IC203	8-759-636-20	IC M54641FP	
IC204	8-752-337-10	IC CXD2554M	
IC301	8-759-506-63	IC PCM67U	
IC303	8-759-996-43	IC RC4558PS	
IC304	8-759-996-43	IC RC4558PS	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
		< JUMPER RESISTOR >	
JW101	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW110	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	
		< TRANSISTOR >	
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-805-69	TRANSISTOR 2SA1341	
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
		< RESISTOR >	
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R108	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R199	1-216-025-00	METAL CHIP 100 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R221	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R222	1-216-033-00	METAL CHIP 220 5% 1/10W	
R223	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R224	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R225	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R228	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R231	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R232	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R307	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R308	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R309	1-216-106-00	METAL CHIP 240K 5% 1/10W	
R310	1-216-106-00	METAL CHIP 240K 5% 1/10W	
R313	1-216-047-00	METAL CHIP 820 5% 1/10W	
R314	1-216-047-00	METAL CHIP 820 5% 1/10W	
R315	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R316	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
R319	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R322	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R323	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R324	1-216-097-00	METAL CHIP 100K 5% 1/10W	
⚠R330	1-249-397-11	CARBON 22 5% 1/4W	F
R331	1-216-009-00	METAL CHIP 22 5% 1/10W	
R332	1-216-009-00	METAL CHIP 22 5% 1/10W	
R401	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R402	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R403	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R404	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R405	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R406	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R407	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R408	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R409	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R410	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R411	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R412	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R413	1-216-089-00	METAL CHIP 47K 5% 1/10W	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R414	1-216-089-00	METAL CHIP 47K 5%	1/10W
R501	1-216-041-00	METAL CHIP 470 5%	1/10W
R502	1-216-041-00	METAL CHIP 470 5%	1/10W
R504	1-216-049-00	METAL CHIP 1K 5%	1/10W
R505	1-216-049-00	METAL CHIP 1K 5%	1/10W
R506	1-216-049-00	METAL CHIP 1K 5%	1/10W
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (◀◀ ⏮)	
S402	1-554-303-21	SWITCH, TACTILE (▶▶ ⏭)	
S403	1-554-303-21	SWITCH, TACTILE (▷ ▮▮)	
S404	1-554-303-21	SWITCH, TACTILE (■)	
S405	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE ⏏)	
S406	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S407	1-554-303-21	SWITCH, TACTILE (CHECK)	
		< TRANSFORMER >	
⚠T101	1-450-704-11	TRANSFORMER, POWER	
		< VIBRATOR >	
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X301	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)	
X401	1-579-063-21	VIBRATOR, CERAMIC (4.19MHz)	

****

Ref. No.	Part No.	Description	Remark
*	1-634-461-11	LOADING BOARD *************	
		< CONNECTOR >	
* CN291	1-564-498-11	PIN, CONNECTOR 5P	
		< SWITCH >	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

****

MISCELLANEOUS

****

Ref. No.	Part No.	Description	Remark
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	MOTOR ASSY, SPINDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	
M291	A-4608-362-A	MOTOR (L) ASSY	

****

HARDWARE LIST

Ref. No.	Part No.	Description	Remark
#1	7-682-547-09	SCREW +BVTT 3X6 (S)	
#2	7-682-547-04	SCREW +BVTT 3X6 (S)	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#6	7-621-775-10	SCREW +B 2.6X4	
#7	7-624-105-04	STOP RING 2.3, TYPE -E	
#8	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
#9	7-621-255-15	SCREW +P 2X3	
#10	7-682-548-04	SCREW +BVTT 3X8 (S)	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-956-998-11

Sony Corporation
Audio Group

English
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Published by Customer Relations and Service Group

CDP-H3700

SONY®
SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
Tourist Model

SUPPLEMENT-1

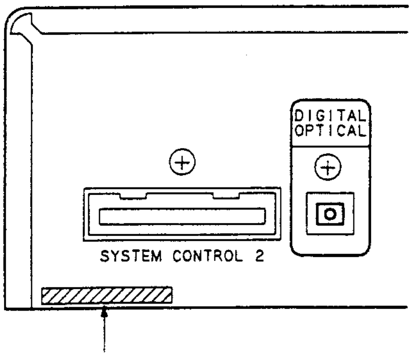
File this supplement with the Service Manual.

Germany model has been added

- The Germany model has been designed based on the CDP-H3700. There for see the CDP-H3700 service manual for the information not contained in this supplement-1.

MODEL IDENTIFICATION

—BACK PANEL—



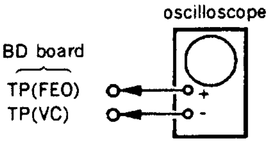
4-948-753-21 (AE4): Germany model

ELECTRICAL BLOCK CHECKING

Note :

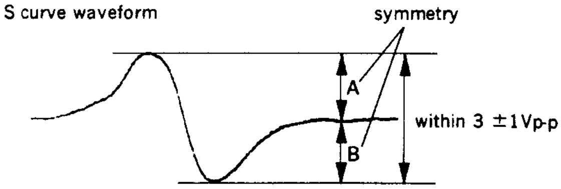
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

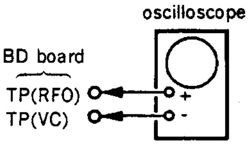

S curve waveform
symmetry
A
B
within 3 ±1Vp-p

5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

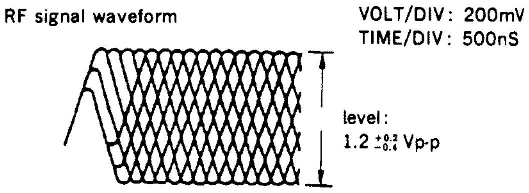

oscilloscope
BD board
TP(RFO)
TP(VC)
+
-

Procedure :

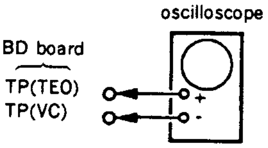
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

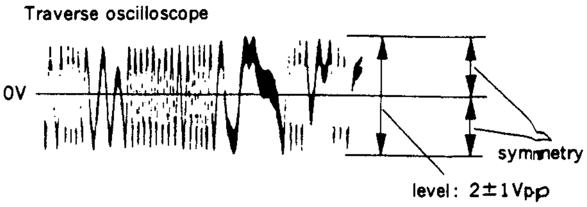

RF signal waveform
VOLT/DIV: 200mV
TIME/DIV: 500nS
level:
1.2 $^{+0.2}_{-0.4}$ Vp-p

E-F Balance Check


oscilloscope
BD board
TP(TEO)
TP(VC)
+
-

Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

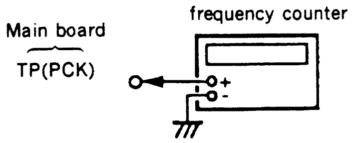

Traverse oscilloscope
0V
symmetry
level: 2±1Vp-p

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.


Main board
TP(PCK)
frequency counter
+
-

2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.

There is no problem.

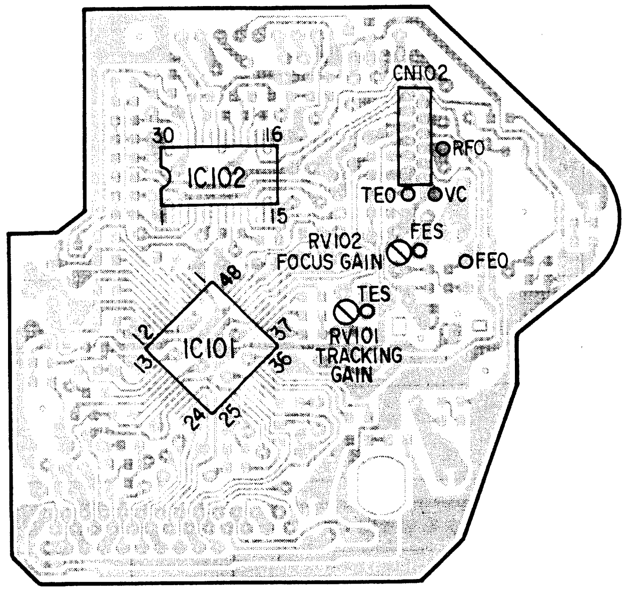
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

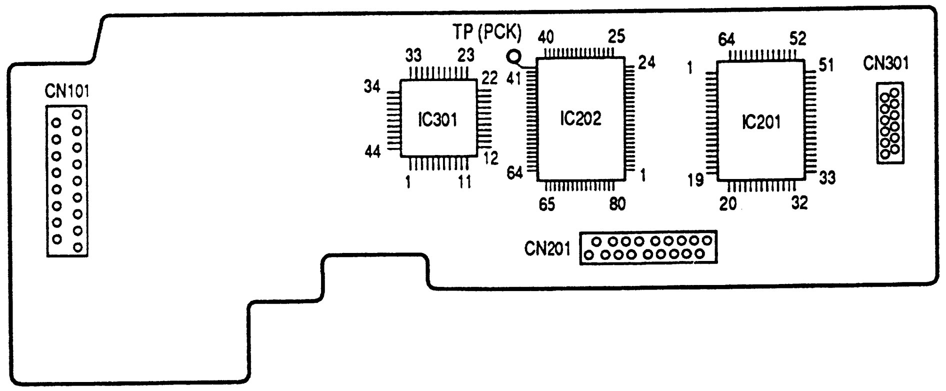
Checking Location :

[BD Board]

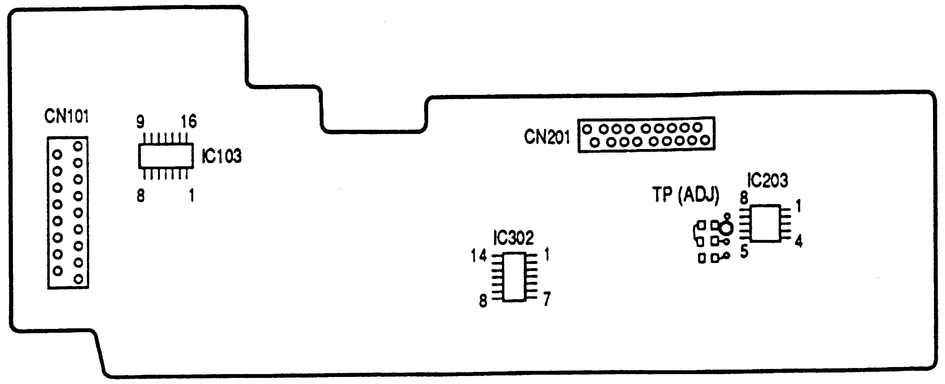
—Conductor Side—


CN102
RFO
30
16
IC102
15
TEO
VC
FES
RV102
FOCUS GAIN
FEO
48
TES
RV101
TRACKING
GAIN
12
13
IC101
37
36
24
25

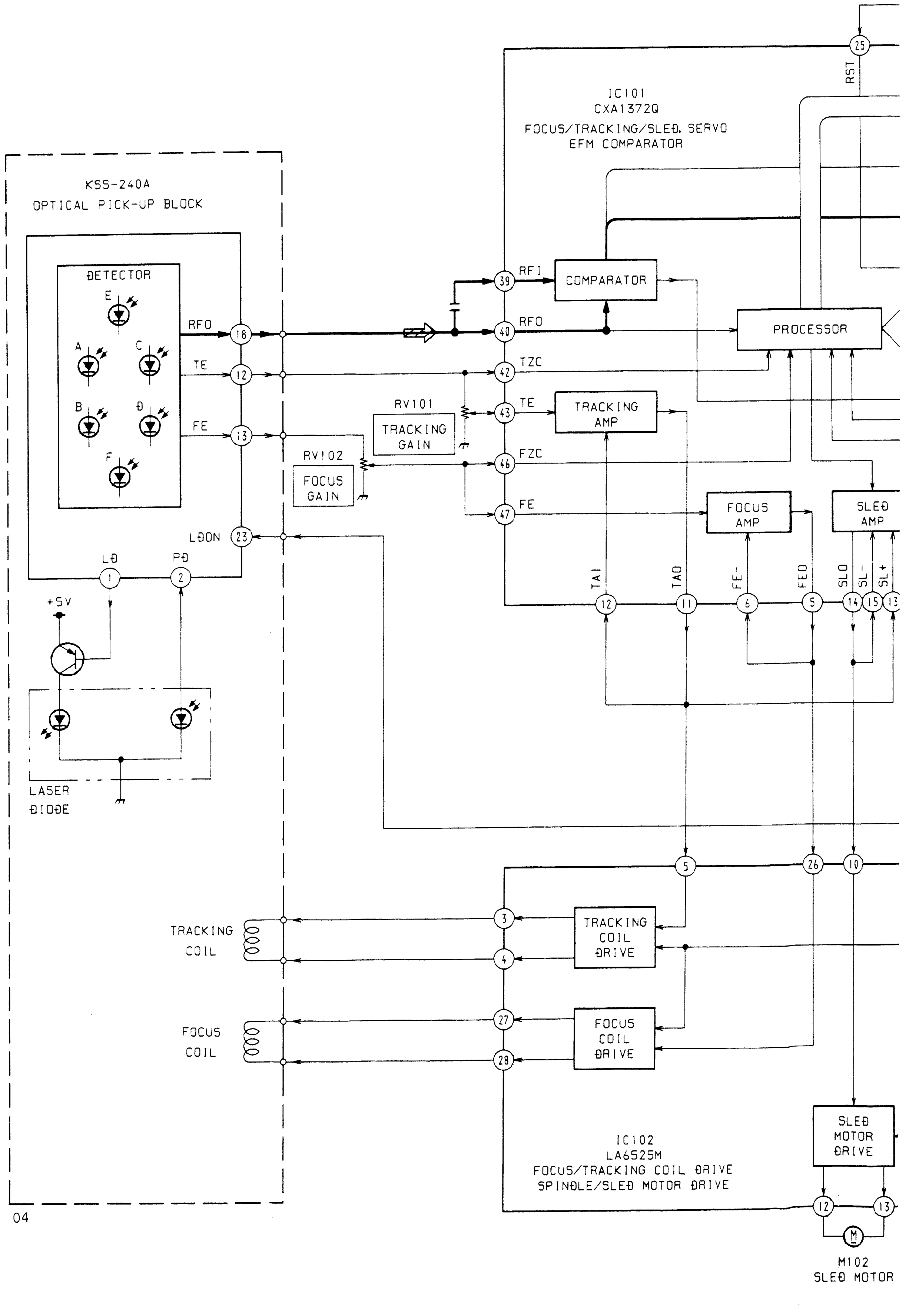
[MAIN Board] —Component Side—

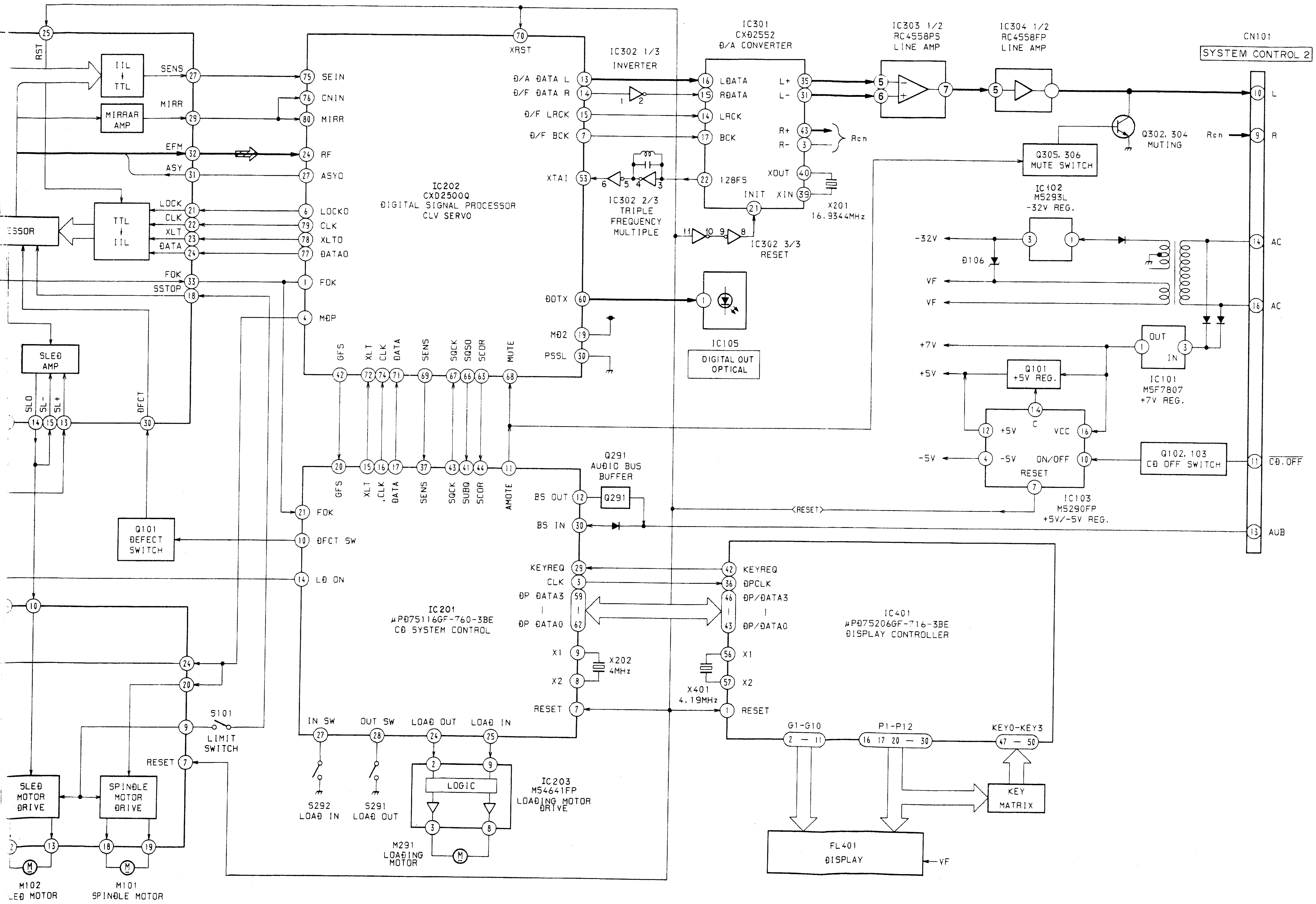

CN101
TP (PCK)
33
23
22
34
IC301
44
12
1
11
40
25
41
24
IC202
64
1
65
80
64
52
1
51
IC201
19
33
20
32
CN301
CN201

[MAIN Board] —Conductor Side—


CN101
9
16
IC103
8
1
CN201
TP (ADJ)
IC203
8
1
4
5
IC302
14
1
8
7

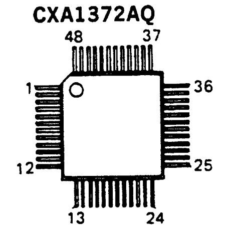
BLOCK DIAGRAM


KSS-240A
OPTICAL PICK-UP BLOCK
DETECTOR
E
A
C
B
D
F
RFO
TE
FE
LDON
LD
PD
+5V
LASER
DIODE
04
18
12
13
23
1
2
TRACKING
COIL
FOCUS
COIL
RV101
TRACKING
GAIN
RV102
FOCUS
GAIN
IC101
CXA1372Q
FOCUS/TRACKING/SLED SERVO
EFM COMPARATOR
RST
25
RFI
39
COMPARATOR
RFO
40
PROCESSOR
TZC
42
TE
43
TRACKING
AMP
FZC
46
FE
47
FOCUS
AMP
SLED
AMP
TAI
TAO
FE-
FEO
SLO
SL-
SL+
12
11
6
5
14
15
13
5
26
10
3
4
TRACKING
COIL
DRIVE
27
28
FOCUS
COIL
DRIVE
IC102
LA6525M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
SLED
MOTOR
DRIVE
12
13
M
M102
SLED MOTOR


RST
IIL
TTL
SENS
MIRR
MIRRAR AMP
EFM
ASY
LOCK
CLK
XLT
DATA
TTL
IIL
FOK
SSTOP
SSOR
SLED AMP
SLO
SL-
SL+
DFCT
Q101 DEFECT SWITCH
XRST
SEIN
CNIN
MIRR
RF
ASYO
LOCKO
CLK
XLTO
DATAO
FOK
MDP
IC202
CXD2500Q
DIGITAL SIGNAL PROCESSOR
CLV SERVO
D/A DATA L
D/F DATA R
D/F LRCK
D/F BCK
XTAI
DOTX
MD2
PSSL
GFS
XLT
CLK
DATA
SENS
SQCK
SQSO
SCOR
MUTE
IC302 1/3
INVERTER
IC302 2/3
TRIPLE
FREQUENCY
MULTIPLE
IC302 3/3
RESET
IC301
CXD2552
D/A CONVERTER
LDATA
RDATA
LRCK
BCK
128FS
L+
L-
R+
R-
Rch
XOUT
XIN
INIT
X201
16.9344MHz
IC105
DIGITAL OUT
OPTICAL
IC303 1/2
RC4558PS
LINE AMP
IC304 1/2
RC4558FP
LINE AMP
Q302, 304
MUTING
Q305, 306
MUTE SWITCH
IC102
M5293L
-32V REG.
-32V
D106
VF
VF
+7V
+5V
-5V
OUT
IN
IC101
M5F7807
+7V REG.
Q101
+5V REG.
C
+5V
VCC
-5V
ON/OFF
RESET
IC103
M5290FP
+5V/-5V REG.
Q102, 103
CD OFF SWITCH
CN101
SYSTEM CONTROL 2
L
R
AC
AC
CD.OFF
AUB
GFS
XLT
.CLK
DATA
SENS
SQCK
SUBQ
SCOR
AMOTE
Q291
AUDIO BUS
BUFFER
BS OUT
BS IN
Q291
RESET
FOK
DFCT SW
LD ON
KEYREQ
CLK
DP DATA3
DP DATA0
IC201
µPD75116GF-760-3BE
CD SYSTEM CONTROL
X1
X2
X202
4MHz
RESET
IN SW
OUT SW
LOAD OUT
LOAD IN
S292
LOAD IN
S291
LOAD OUT
LOGIC
IC203
M54641FP
LOADING MOTOR
DRIVE
M291
LOADING
MOTOR
KEYREQ
DPCLK
DP/DATA3
DP/DATA0
IC401
µPD75206GF-716-3BE
DISPLAY CONTROLLER
X1
X2
X401
4.19MHz
RESET
G1-G10
P1-P12
KEY0-KEY3
KEY MATRIX
FL401
DISPLAY
VF
S101
LIMIT
SWITCH
RESET
SLED
MOTOR
DRIVE
SPINDLE
MOTOR
DRIVE
M102
LED MOTOR
M101
SPINDLE MOTOR

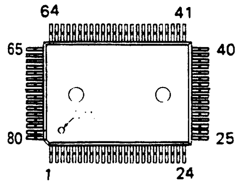
SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ


48
37
1
36
12
25
13
24

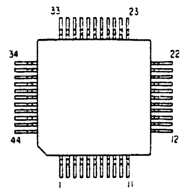
(TOP VIEW)

CXD2500Q

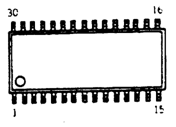

64
41
65
40
80
25
1
24

MARKING SIDE VIEW

CXD2552Q

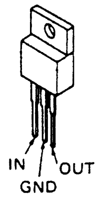


LA6532M

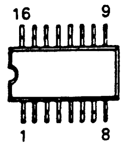


(TOP VIEW)

M5F7807

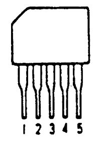


M5290FP

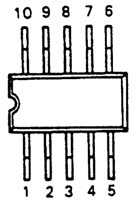


(TOP VIEW)

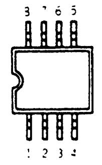
M5293L



M54641FP

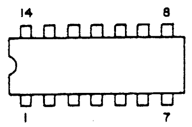

10 9 8 7 6
1 2 3 4 5

RC4558PS



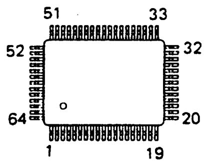
(TOPVIEW)

SN74HCU04ANS



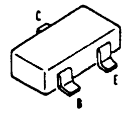
(TOP VIEW)

μPD75116GF
-F21-3BE
μPD75206GF
-716-3BE

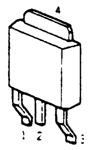

51
33
52
32
64
20
1
19

(TOP VIEW)

DTC144EK
2SA1162G
2SC3052-EF
2SC3624A-L15

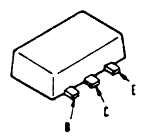


2SA1341

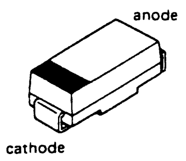


1 BASE
2 COLLECTOR
3 EMITTER
4 COLLECTOR

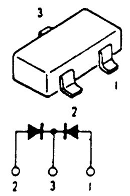
2SB1122-S



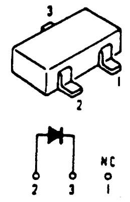
EC10DS2
EC10QS-04


anode
cathode

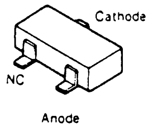
MA152WK



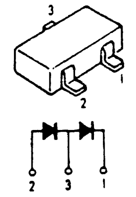
UZM3.9X
UZM6.8Y



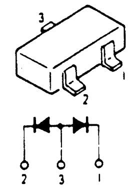
UZM8.2Z


Cathode
NC
Anode

1SS226



1S2836



• Semiconductor Location

EXCEPT BD BOARD

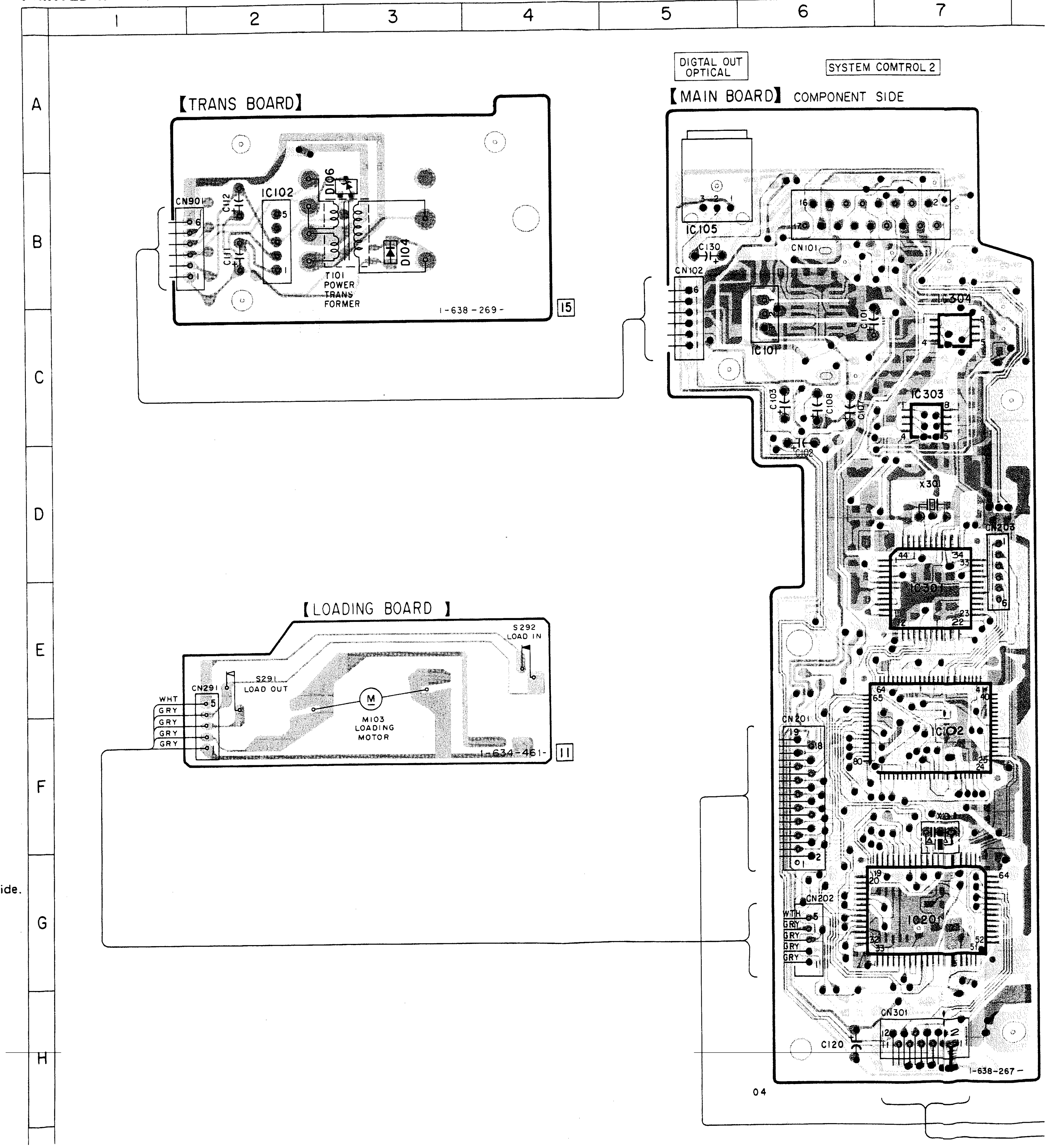
Ref. No.	Location
D101	B-10
D102	B-10
D103	C-11
D113	B-11
D131	B-10
D132	C-10
D201	G-9
D206	G-10
D301	D-9
D302	B-9
D401	D-17
D402	D-19
D403	D-15
IC101	C-6
IC102	B-2
IC103	C-10
IC105	B-5
IC201	G-7
IC202	F-7
IC203	G-9
IC301	E-7
IC302	E-9
IC303	C-7
IC304	C-7
IC401	D-15
Q101	C-9
Q102	B-9
Q103	B-10
Q201	G-9
Q301	C-9
Q302	B-9
Q303	C-9
Q304	B-9
Q305	B-9
Q306	B-9

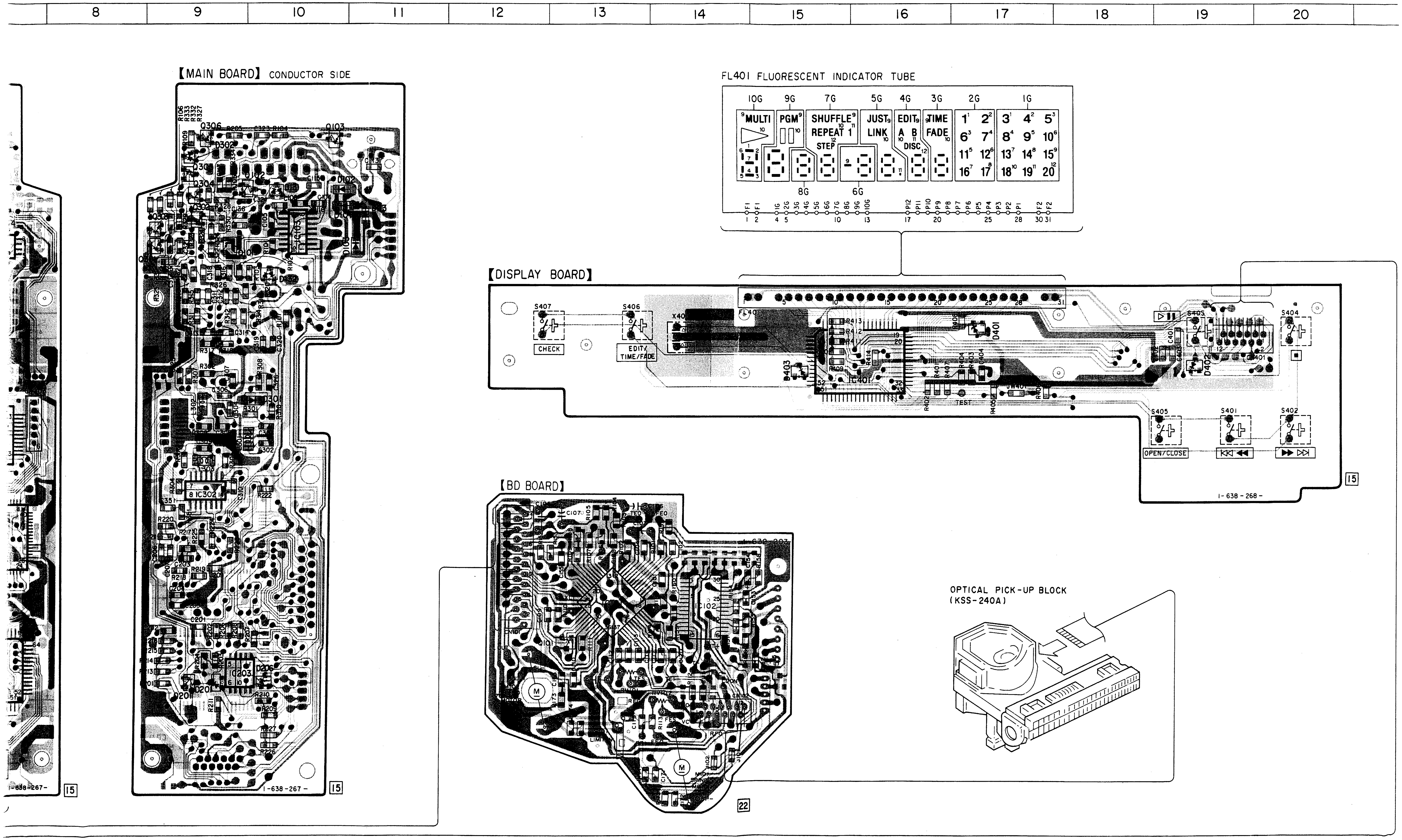
BD BOARD

Ref. No.	Location
Q101	F-13
IC101	F-13
IC102	F-14

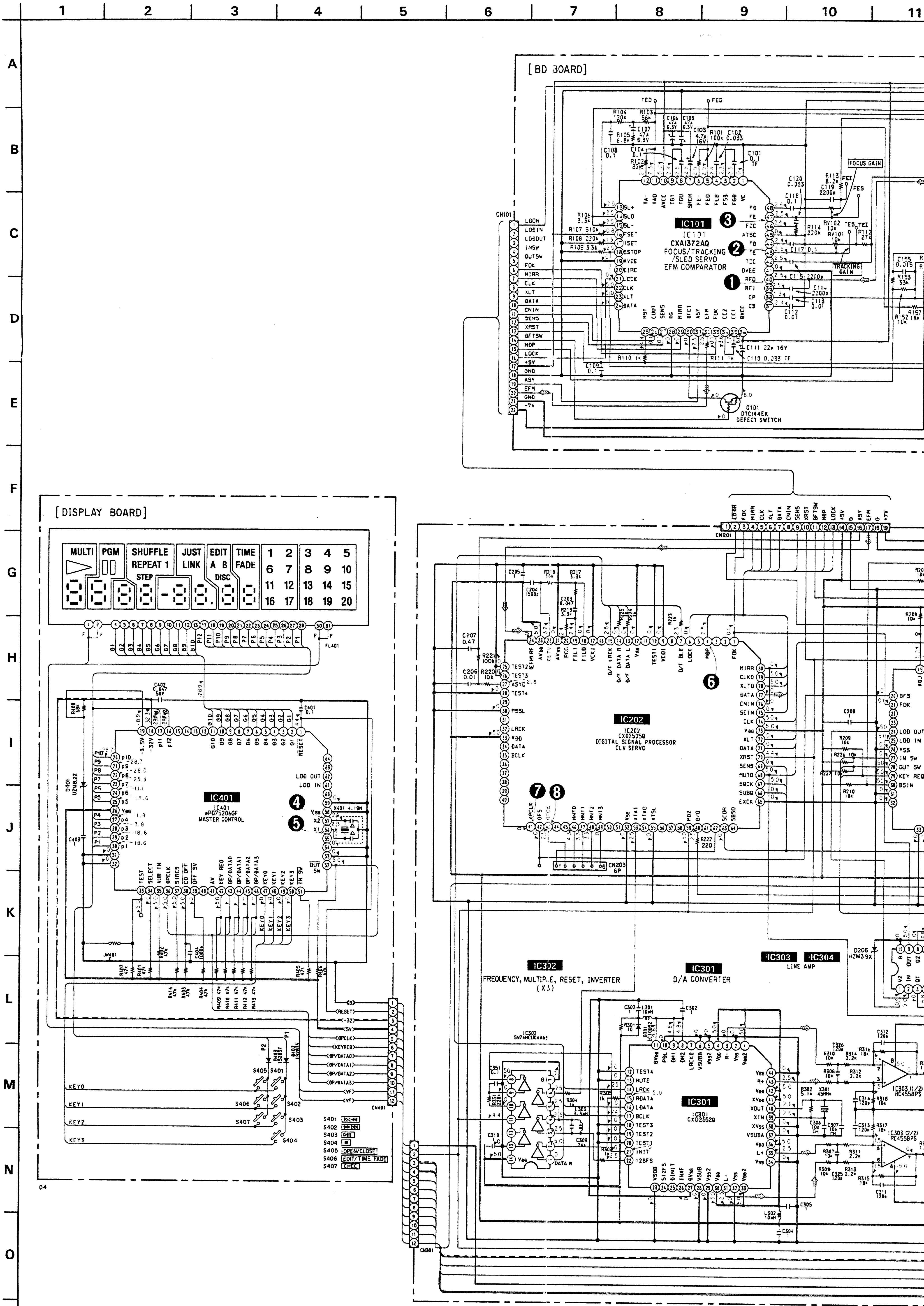
Note:
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ░ : Pattern of the rear side.

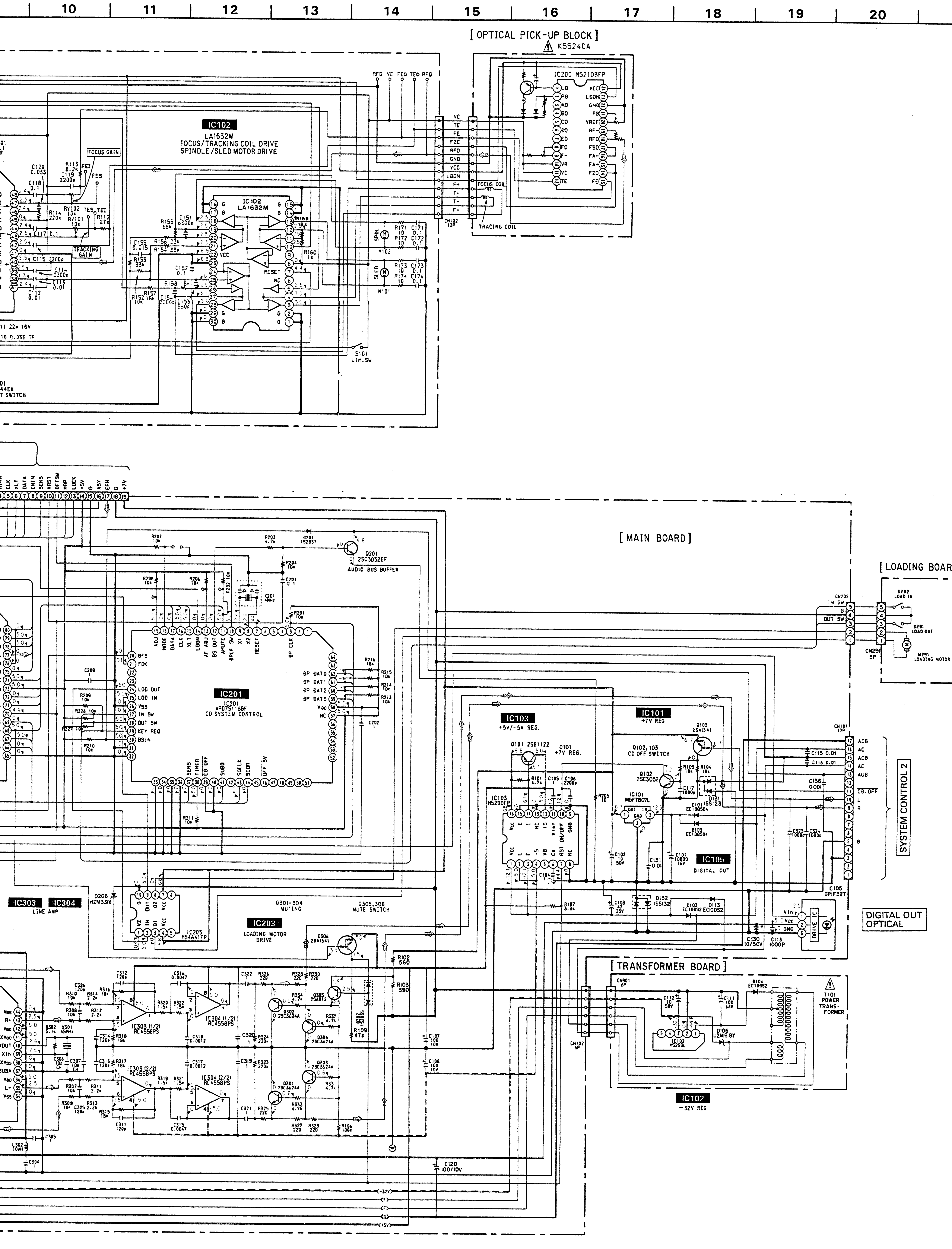
PRINTED WIRING BOARDS

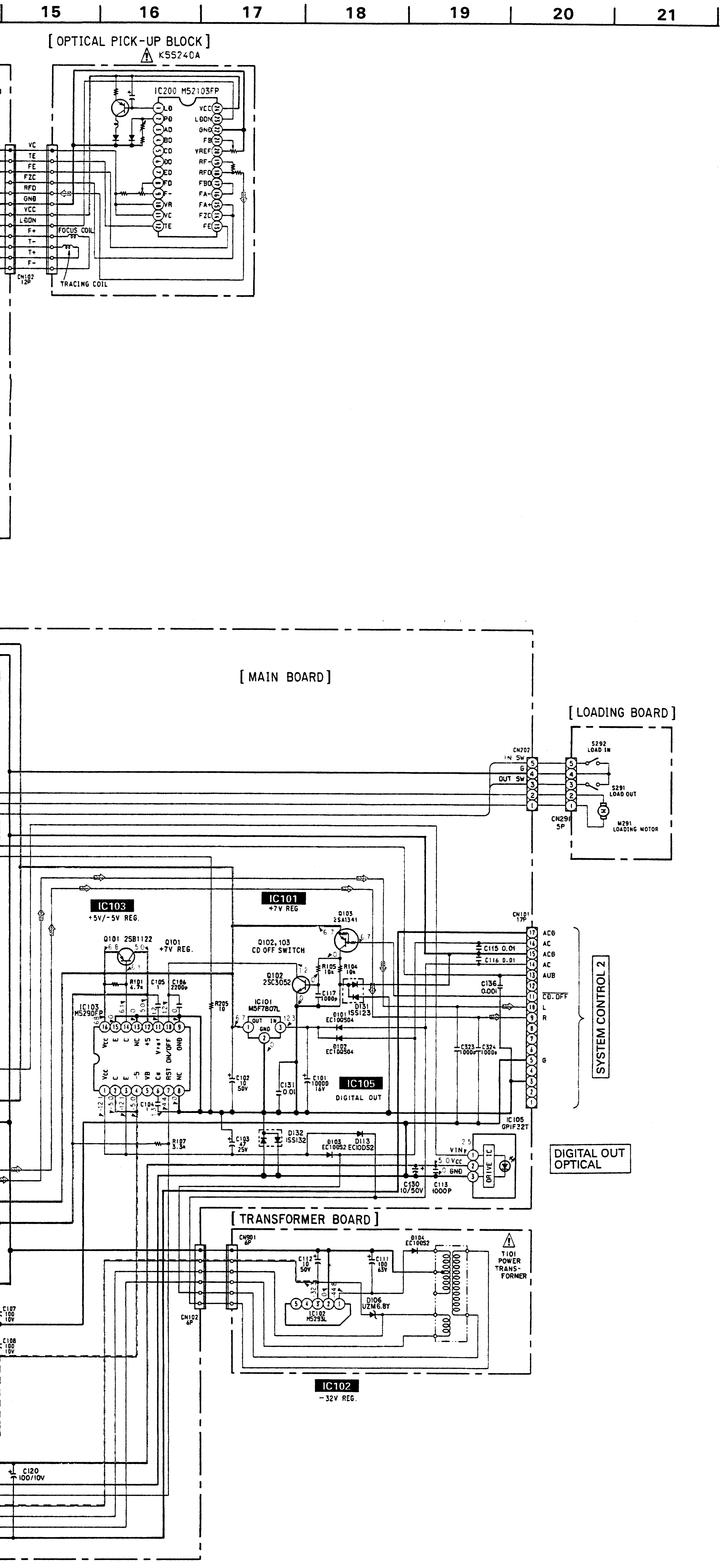

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
【TRANS BOARD】
CN901
IC102
D106
D104
C112
C111
T101 POWER TRANS FORMER
1-638-269-
15
【LOADING BOARD】
S292 LOAD IN
S291 LOAD OUT
M103 LOADING MOTOR
CN291
WHT
GRY
GRY
GRY
GRY
1-634-461-
11
DIGTAL OUT OPTICAL
SYSTEM COMTROL 2
【MAIN BOARD】 COMPONENT SIDE
IC105
C130
CN101
CN102
IC101
IC304
C103
C108
C107
IC303
C102
X301
CN203
IC301
CN201
IC102
CN202
WTH
GRY
GRY
GRY
GRY
IC201
CN301
C120
1-638-267-
04


8
9
10
11
12
13
14
15
16
17
18
19
20
【MAIN BOARD】 CONDUCTOR SIDE
Q306
Q302
Q303
Q304
D302
D102
IC103
IC302
IC203
C201
R220
R218
R211
R226
1-638-267-
15
FL401 FLUORESCENT INDICATOR TUBE
10G
9G
7G
5G
4G
3G
2G
1G
8G
6G
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
【DISPLAY BOARD】
S407
S406
CHECK
EDIT/
TIME/FADE
FL401
IC401
D401
D402
D403
S404
S405
S401
S402
OPEN/CLOSE
TEST
1-638-268-
15
【BD BOARD】
IC102
M
22
OPTICAL PICK-UP BLOCK
(KSS-240A)

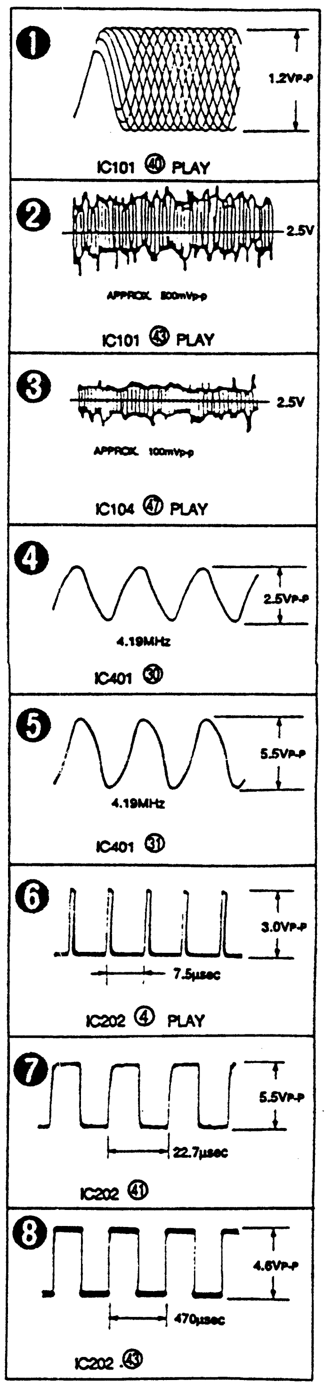
SCHEMATIC DIAGRAM • **Refer to page 15 for IC Block Diagrams.**


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[BD BOARD]
IC101
CXA1372AQ
FOCUS/TRACKING
/SLED SERVO
EFM COMPARATOR
FOCUS GAIN
TRACKING GAIN
CN101
Q101
DTC144EK
DEFECT SWITCH
[DISPLAY BOARD]
MULTI
PGM
SHUFFLE
REPEAT 1
STEP
JUST
LINK
EDIT
A B
DISC
TIME
FADE
FL401
IC401
μPD75206GF
MASTER CONTROL
X401 4.19M
D401
UZN8.2Z
JW401
CN401
S401
S402
S403
S404
S405 OPEN/CLOSE
S406 EDIT/TIME FADE
S407 CHECK
KEY0
KEY1
KEY2
KEY3
CN201
IC202
CXD2505Q
DIGITAL SIGNAL PROCESSOR
CLV SERVO
CN203
6P
IC302
FREQUENCY, MULTIPLE, RESET, INVERTER
(X3)
SN74HCU04ANS
IC301
D/A CONVERTER
CXD2552Q
X301
45MHz
IC303
IC304
LINE AMP
IC303 (1/2)
RC4558PS
IC303 (2/2)
RC4558PS
D206
HZM3.9X
CN301
04


10
11
12
13
14
15
16
17
18
19
20
[OPTICAL PICK-UP BLOCK]
KSS240A
IC200 M52103FP
IC102
LA1632M
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE
FOCUS GAIN
TRACKING GAIN
FOCUS COIL
TRACKING COIL
CN102 12P
SPDL M102
SLED M101
S101 LIM.SW
[MAIN BOARD]
[LOADING BOARD]
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN202
CN291 5P
Q201 2SC3052EF
AUDIO BUS BUFFER
X201 4MHz
IC201
IC201 µPD75116GF
CD SYSTEM CONTROL
IC103
+5V/-5V REG.
Q101 2SB1122
Q101 +7V REG.
IC103 M5290FP
IC101
+7V REG
Q103 2SA1341
Q102, 103 CD OFF SWITCH
Q102 2SC3052
IC101 M5F7807L
D131 1SS123
CN101 17P
SYSTEM CONTROL 2
IC105
DIGITAL OUT
IC105 GP1F32T
DIGITAL OUT OPTICAL
IC303
IC304
LINE AMP
D206 HZM3.9X
IC203 M54641FP
Q301-304 MUTING
Q305,306 MUTE SWITCH
IC203
LOADING MOTOR DRIVE
Q306 2SA1341
IC303 (1/2) RC4558PS
IC304 (1/2) RC4558PS
IC303 (2/2) RC4558PS
IC304 (2/2) RC4558PS
X301 45MHz
[TRANSFORMER BOARD]
CN901 6P
CN102 6P
IC102 M5293L
D106 UZM6.8Y
T101 POWER TRANSFORMER
IC102
-32V REG.
C120 100/10V


15
16
17
18
19
20
21
[OPTICAL PICK-UP BLOCK]
K5S240A
IC200 M52103FP
FOCUS COIL
TRACING COIL
CN102 12P
[MAIN BOARD]
[LOADING BOARD]
S292 LOAD IN
S291 LOAD OUT
M291 LOADING MOTOR
CN291 5P
CN202
IN SW
OUT SW
IC103
+5V/-5V REG.
Q101 2SB1122
Q101 +7V REG.
IC103 M5290FP
IC101
+7V REG
Q103 2SA1341
Q102, 103 CD OFF SWITCH
Q102 2SC3052
IC101 M5F7807L
IC105
DIGITAL OUT
IC105 GP1F22T
CN101 17P
SYSTEM CONTROL 2
CD. OFF
DIGITAL OUT OPTICAL
[TRANSFORMER BOARD]
CN901 6P
CN102 6P
IC102 M5293L
D106 UZM6.8Y
T101 POWER TRANS-FORMER
IC102
-32V REG.
C120 100/10V

• Waveforms



Note:

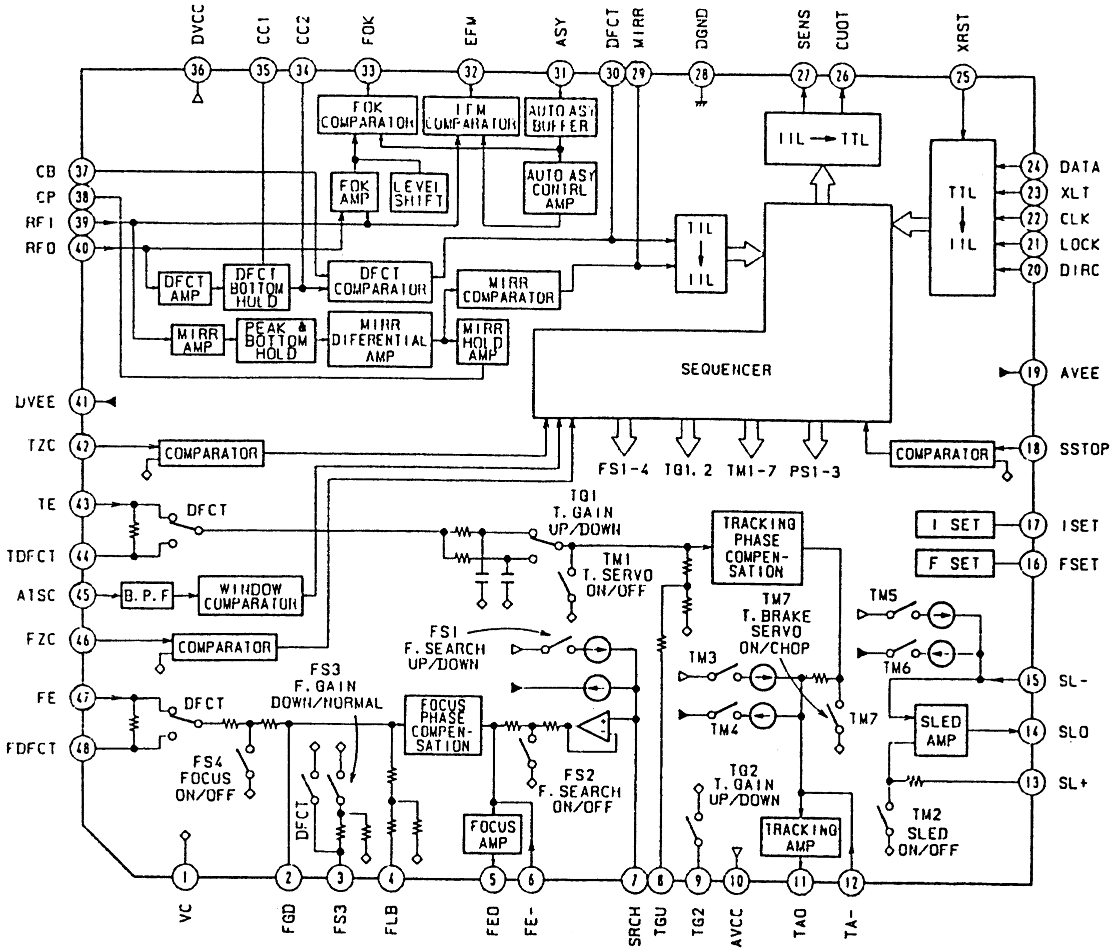
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄W or less unless otherwise specified.
- △ : internal component.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

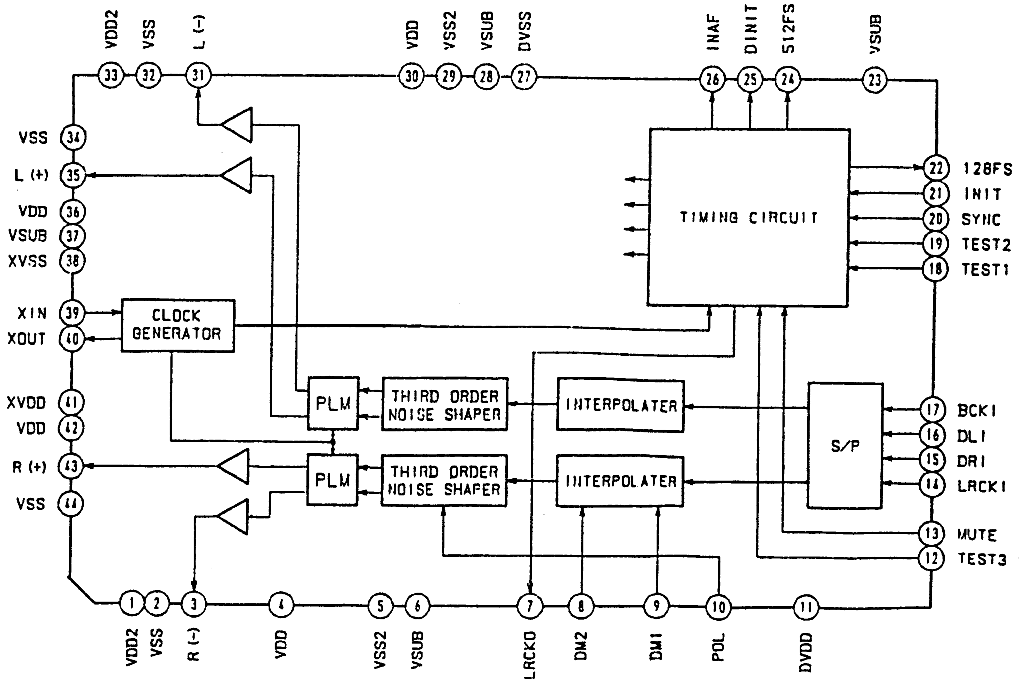
- ━━ : B+ Line
- ━ ━ : B− Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

• IC Block Diagrams

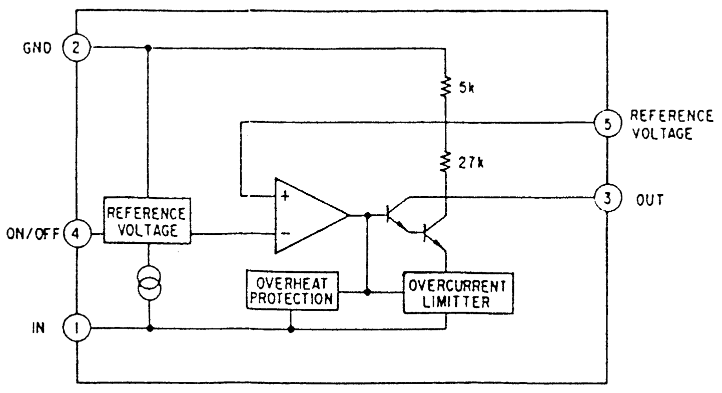
IC101 CXA1372AQ


DVCC
CC1
CC2
FOK
EFM
ASY
DFCT
MIRR
DGND
SENS
CUOT
XRST
FOK COMPARATOR
EFM COMPARATOR
AUTO ASY BUFFER
AUTO ASY CONTRL AMP
FOK AMP
LEVEL SHIFT
IIL → TTL
TTL → IIL
TTL IIL
CB
CP
RFI
RFO
DFCT AMP
DFCT BOTTOM HOLD
DFCT COMPARATOR
MIRR COMPARATOR
MIRR AMP
PEAK & BOTTOM HOLD
MIRR DIFERENTIAL AMP
MIRR HOLD AMP
SEQUENCER
DATA
XLT
CLK
LOCK
DIRC
AVEE
DVEE
TZC
COMPARATOR
FS1-4 TG1, 2 TM1-7 PS1-3
SSTOP
TE
DFCT
TDFCT
ATSC
B.P.F
WINDOW COMPARATOR
FZC
FE
FDFCT
TG1 T. GAIN UP/DOWN
TM1 T. SERVO ON/OFF
TRACKING PHASE COMPEN-SATION
I SET
F SET
ISET
FSET
FS1 F. SEARCH UP/DOWN
FS3 F. GAIN DOWN/NORMAL
FS4 FOCUS ON/OFF
FOCUS PHASE COMPEN-SATION
FS2 F. SEARCH ON/OFF
FOCUS AMP
TM7 T. BRAKE SERVO ON/CHOP
TM3
TM4
TM5
TM6
TM7
SLED AMP
TG2 T. GAIN UP/DOWN
TRACKING AMP
TM2 SLED ON/OFF
SL-
SLO
SL+
VC
FGD
FS3
FLB
FEO
FE-
SRCH
TGU
TG2
AVCC
TAO
TA-

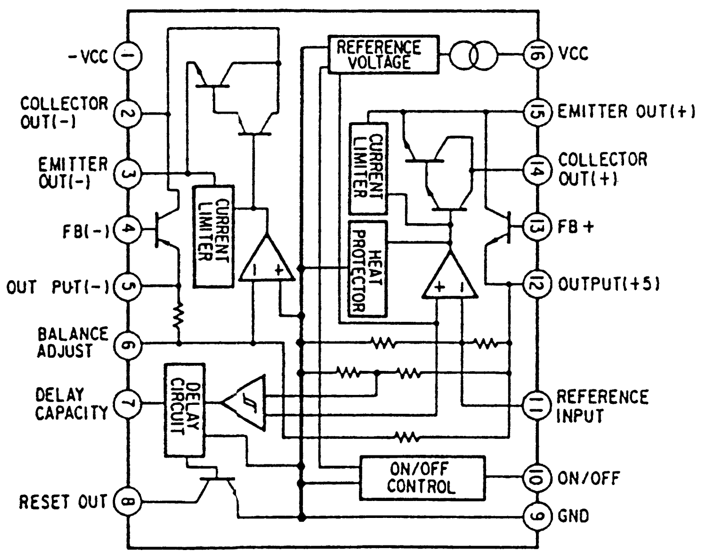
IC301 CXD2552Q


VDD2
VSS
L (-)
VDD
VSS2
VSUB
DVSS
INAF
DINIT
512FS
VSUB
VSS
L (+)
VDD
VSUB
XVSS
TIMING CIRCUIT
128FS
INIT
SYNC
TEST2
TEST1
XIN
XOUT
CLOCK GENERATOR
XVDD
VDD
R (+)
VSS
PLM
THIRD ORDER NOISE SHAPER
INTERPOLATER
S/P
BCKI
DLI
DRI
LRCKI
MUTE
TEST3
VDD2
VSS
R (-)
VDD
VSS2
VSUB
LRCKO
DM2
DM1
POL
DVDD

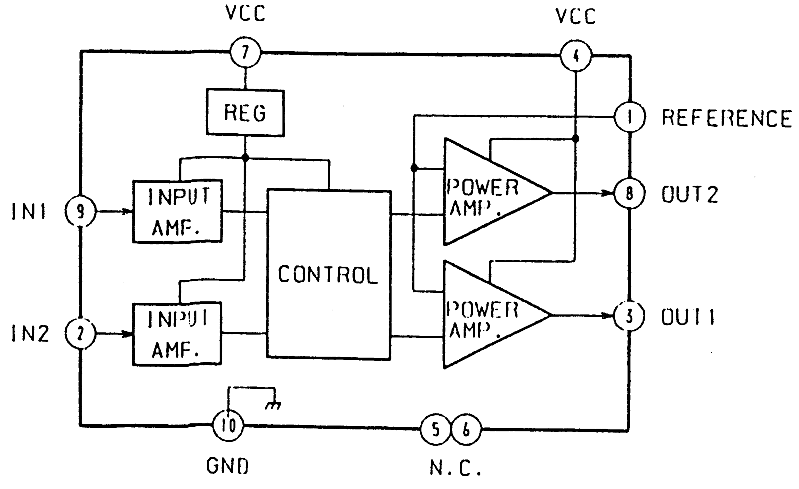
IC102 M5293L


GND
5k
27k
REFERENCE VOLTAGE
OUT
ON/OFF
REFERENCE VOLTAGE
OVERHEAT PROTECTION
OVERCURRENT LIMITTER
IN

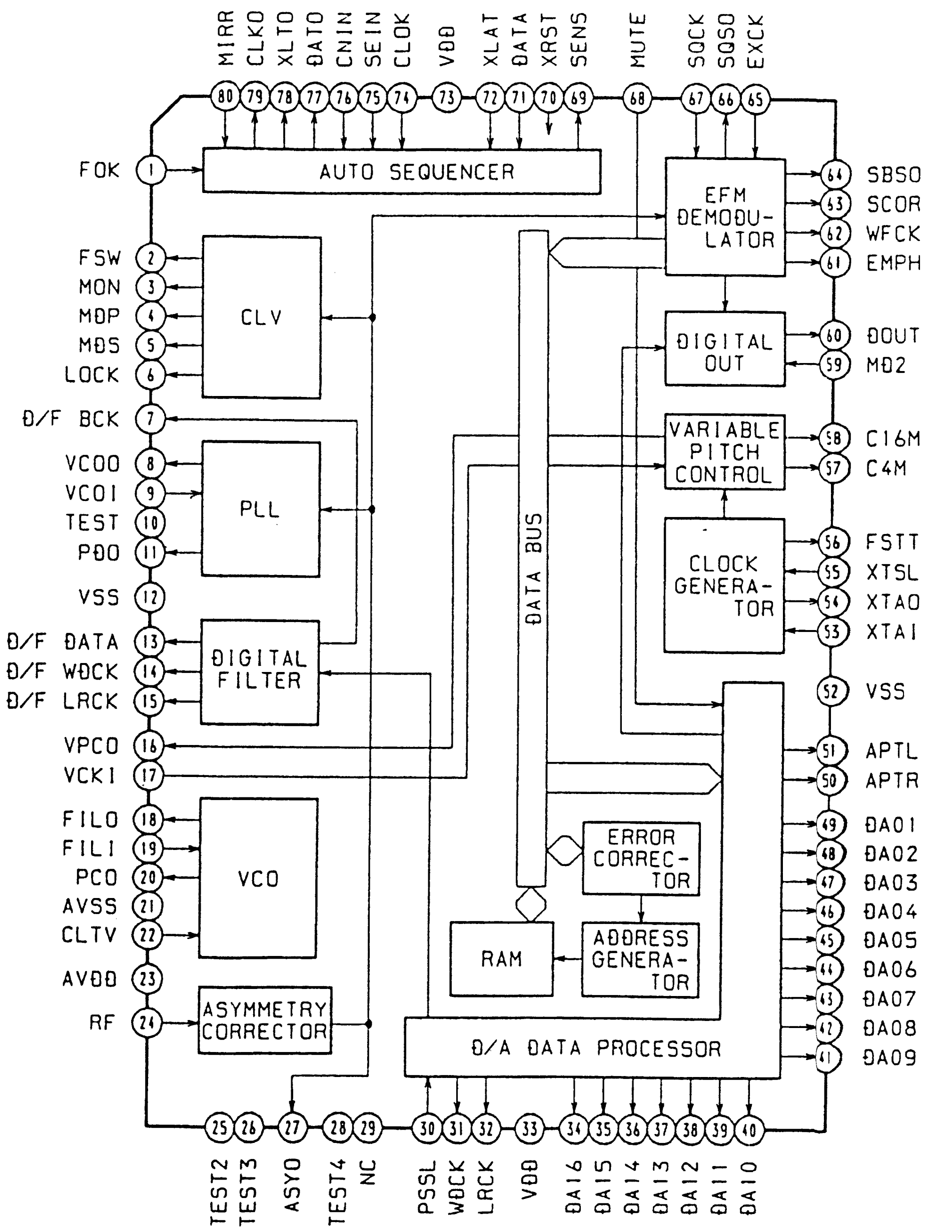
IC103 M5290FP


-VCC
COLLECTOR OUT(-)
EMITTER OUT(-)
FB(-)
OUT PUT(-)
BALANCE ADJUST
DELAY CAPACITY
RESET OUT
REFERENCE VOLTAGE
VCC
EMITTER OUT(+)
COLLECTOR OUT(+)
FB+
OUTPUT(+5)
REFERENCE INPUT
ON/OFF
GND
CURRENT LIMITER
CURRENT LIMITER
HEAT PROTECTOR
DELAY CIRCUIT
ON/OFF CONTROL

IC203 M54641FP


VCC
VCC
REG
REFERENCE
IN1
INPUT AMP.
CONTROL
POWER AMP.
OUT2
IN2
INPUT AMP.
POWER AMP.
OUT1
GND
N.C.

IC202 CXD2505Q


MIRR
CLKO
XLTO
DATO
CNIN
SEIN
CLOK
VDD
XLAT
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
FOK
AUTO SEQUENCER
EFM DEMODU-LATOR
SBSO
SCOR
WFCK
EMPH
FSW
MON
MDP
MDS
LOCK
CLV
DIGITAL OUT
DOUT
MD2
D/F BCK
VARIABLE PITCH CONTROL
C16M
C4M
VCOO
VCOI
TEST
PDO
PLL
CLOCK GENERA-TOR
FSTT
XTSL
XTAO
XTAI
VSS
DATA BUS
D/F DATA
D/F WDCK
D/F LRCK
DIGITAL FILTER
VSS
VPCO
VCKI
APTL
APTR
FILO
FILI
PCO
AVSS
CLTV
VCO
ERROR CORREC-TOR
RAM
ADDRESS GENERA-TOR
DA01
DA02
DA03
DA04
DA05
DA06
DA07
DA08
DA09
AVDD
RF
ASYMMETRY CORRECTOR
D/A DATA PROCESSOR
TEST2
TEST3
ASYO
TEST4
NC
PSSL
WDCK
LRCK
VDD
DA16
DA15
DA14
DA13
DA12
DA11
DA10

EXPLODED VIEW

The Difference between AEP Model and Germany Model.

Page	AEP model				Germany model		
	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
23	*7	4-948-753-11	PANEL (CDP), BACK		*4-948-753-21	PANEL (CDP), BACK	
	*10	A-4649-273-A	DISPLAY BOARD, COMPLETE		*A-4617-811-A	DISPLAY BOARD, COMPLETE	
	*11	A-4649-275-A	MAIN BOARD, COMPLETE		*A-4617-805-A	MAIN BOARD, COMPLETE	
	13	1-690-753-11	WIER (FLAT TYPE) (22 CORE)		1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
	*14	1-642-542-11	POWER BOARD		*1-638-269-11	TRANSFORMER BOARD	
	IC105	8-749-923-04	IC TOTX178		8-749-921-12	IC GP1F32T	
	⚠T101	1-450-704-11	TRANSFORMER, POWER		⚠1-450-341-11	TRANSFORMER, POWER	

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-4617-371-A	BD BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC101	8-752-053-73	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
		< JUMPER RESISTOR >			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W

Ref. No.	Part No.	Description	Remark
R173	1-216-001-00	METAL CHIP 10 5%	1/10W
R174	1-216-001-00	METAL CHIP 10 5%	1/10W
		< VARIABLE RESISTOR >	
RV101	1-241-630-11	RES, ADJ, CARBON 10K	
RV102	1-241-630-11	RES, ADJ, CARBON 10K	
		< SWITCH >	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

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*	A-4617-811-A	DISPLAY BOARD, COMPLETE	
		***********************	
*	A-4617-805-A	MAIN BOARD, COMPLETE	
		********************	
*	1-638-269-11	TRANSFORMER BOARD	
		*****************	
*	1-560-242-21	BUS BAR 4P	
*	4-880-403-11	HEAT SINK	
*	4-932-810-11	CUSHION (FL)	
	4-946-509-01	SPACER	
	7-682-548-04	SCREW +BVTT 3X8 (S)	
		< CAPACITOR >	
C101	1-126-939-11	ELECT 10000uF 20%	16V
C102	1-124-907-11	ELECT 10uF 20%	50V
C103	1-124-477-11	ELECT 47uF 20%	25V
C104	1-164-346-11	CERAMIC CHIP 1uF	16V
C105	1-164-346-11	CERAMIC CHIP 1uF	16V
C106	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C107	1-124-443-00	ELECT 100uF 20%	10V
C108	1-124-443-00	ELECT 100uF 20%	10V
C111	1-126-063-11	ELECT 100uF 20%	63V
C112	1-124-907-11	ELECT 10uF 20%	50V
C113	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C115	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C116	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C117	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C120	1-124-443-00	ELECT 100uF 20%	10V
C130	1-124-907-11	ELECT 10uF 20%	50V
C131	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C136	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C201	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C202	1-164-346-11	CERAMIC CHIP 1uF	16V
C203	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C204	1-163-011-11	CERAMIC CHIP 0.0015uF 10%	50V
C205	1-164-346-11	CERAMIC CHIP 1uF	16V
C206	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C207	1-164-005-11	CERAMIC CHIP 0.47uF	25V

Ref. No.	Part No.	Description	Remark
C209	1-164-346-11	CERAMIC CHIP 1uF	16V
C302	1-164-346-11	CERAMIC CHIP 1uF	16V
C303	1-164-346-11	CERAMIC CHIP 1uF	16V
C304	1-164-346-11	CERAMIC CHIP 1uF	16V
C305	1-164-346-11	CERAMIC CHIP 1uF	16V
C306	1-163-227-11	CERAMIC CHIP 10PF 5%	50V
C307	1-163-227-11	CERAMIC CHIP 10PF 5%	50V
C309	1-163-102-00	CERAMIC CHIP 24PF 5%	50V
C310	1-164-346-11	CERAMIC CHIP 1uF	16V
C311	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C312	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C313	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C314	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C315	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C316	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C317	1-163-010-11	CERAMIC CHIP 0.0012uF 10%	50V
C318	1-163-010-11	CERAMIC CHIP 0.0012uF 10%	50V
C319	1-164-346-11	CERAMIC CHIP 1uF	16V
C320	1-164-346-11	CERAMIC CHIP 1uF	16V
C321	1-164-346-11	CERAMIC CHIP 1uF	16V
C322	1-164-346-11	CERAMIC CHIP 1uF	16V
C323	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C324	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C325	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C326	1-163-119-00	CERAMIC CHIP 120PF 5%	50V
C351	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C401	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C402	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C403	1-164-346-11	CERAMIC CHIP 1uF	16V
C404	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
		< CONNECTOR >	
* CN101	1-569-624-11	SOCKET, CONNECTOR 17P(SYSTEM CONTROL 2)	
CN102	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P	
CN201	1-568-802-11	SOCKET, CONNECTOR 19P	
* CN202	1-564-339-00	PIN, CONNECTOR 5P	
* CN203	1-564-340-00	PIN, CONNECTOR 6P	
* CN301	1-573-099-11	HOUSING, CONNECTOR 12P	
* CN401	1-573-098-11	HOUSING, CONNECTOR 12P	
CN901	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	
		< DIODE >	
D101	8-719-210-39	DIODE EC10QS-04	
D102	8-719-210-39	DIODE EC10QS-04	
D103	8-719-210-33	DIODE EC10DS2	
D104	8-719-210-33	DIODE EC10DS2	
D106	8-719-021-59	DIODE UZM6.8Y	
D113	8-719-210-33	DIODE EC10DS2	
D131	8-719-800-76	DIODE 1SS226	

DISPLAY MAIN TRANSFORMER

Ref.No.	Part No.	Description	Remark
D132	8-719-800-76	DIODE 1SS226	
D201	8-719-400-18	DIODE MA152WK	
D206	8-719-021-11	DIODE UZM3.9X	
D301	8-719-210-33	DIODE EC10DS2	
D302	8-719-104-34	DIODE 1S2836	
D401	8-719-021-77	DIODE UZM8.2Z	
D402	8-719-104-34	DIODE 1S2836	
D403	8-719-400-18	DIODE MA152WK	
		< FLUORESCENT INDICATOR >	
FL401	1-519-652-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC101	8-759-604-86	IC M5F7807	
IC102	8-759-633-42	IC M5293L	
IC103	8-759-636-24	IC M5290FP	
IC105	8-749-921-12	IC GP1F32T	
IC201	8-759-059-86	IC uPD75116GF-F21-3BE	
IC202	8-752-340-37	IC CXD2505Q	
IC203	8-759-636-20	IC M54641FP	
IC301	8-752-334-87	IC CXD2552Q	
IC302	8-759-927-29	IC SN74HCU04ANS	
IC303	8-759-996-43	IC RC4558PS	
IC304	8-759-996-43	IC RC4558PS	
IC401	8-759-154-14	IC uPD75206GF-716-3BE	
		< JUMPER RESISTOR >	
JW401	1-216-295-00	METAL CHIP 0 5% 1/10W	
		< COIL >	
L301	1-410-381-11	INDUCTOR CHIP 10uH	
L302	1-410-381-11	INDUCTOR CHIP 10uH	
L303	1-410-375-11	INDUCTOR CHIP 3.3uH	
		< TRANSISTOR >	
Q101	8-729-804-41	TRANSISTOR 2SB1122-S	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-805-69	TRANSISTOR 2SA1341	
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q301	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q302	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q303	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q304	8-729-107-46	TRANSISTOR 2SC3624A-L15	
Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q306	8-729-805-69	TRANSISTOR 2SA1341	

Ref.No.	Part No.	Description	Remark
		< RESISTOR >	
R101	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R102	1-216-043-00	METAL CHIP 560 5% 1/10W	
R103	1-216-039-00	METAL CHIP 390 5% 1/10W	
R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R105	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R106	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R107	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R205	1-216-001-00	METAL CHIP 10 5% 1/10W	
R206	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R209	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R210	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R217	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R220	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R221	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R222	1-216-033-00	METAL CHIP 220 5% 1/10W	
R223	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R224	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R225	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R226	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R227	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R301	1-216-001-00	METAL CHIP 10 5% 1/10W	
R302	1-216-066-00	METAL CHIP 5.1K 5% 1/10W	
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R304	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R305	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R307	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R308	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R309	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R310	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R311	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R312	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R313	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R314	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R315	1-216-079-00	METAL CHIP 18K 5%	1/10W
R316	1-216-079-00	METAL CHIP 18K 5%	1/10W
R317	1-216-079-00	METAL CHIP 18K 5%	1/10W
R318	1-216-079-00	METAL CHIP 18K 5%	1/10W
R319	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R320	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R321	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R322	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R323	1-216-105-00	METAL CHIP 220K 5%	1/10W
R324	1-216-105-00	METAL CHIP 220K 5%	1/10W
R325	1-216-033-00	METAL CHIP 220 5%	1/10W
R326	1-216-033-00	METAL CHIP 220 5%	1/10W
R327	1-216-033-00	METAL CHIP 220 5%	1/10W
R328	1-216-033-00	METAL CHIP 220 5%	1/10W
R329	1-216-033-00	METAL CHIP 220 5%	1/10W
R330	1-216-033-00	METAL CHIP 220 5%	1/10W
R331	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R332	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R333	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R334	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R351	1-216-105-00	METAL CHIP 220K 5%	1/10W
R401	1-216-089-00	METAL CHIP 47K 5%	1/10W
R402	1-216-089-00	METAL CHIP 47K 5%	1/10W
R403	1-216-089-00	METAL CHIP 47K 5%	1/10W
R404	1-216-089-00	METAL CHIP 47K 5%	1/10W
R405	1-216-089-00	METAL CHIP 47K 5%	1/10W
R406	1-216-089-00	METAL CHIP 47K 5%	1/10W
R407	1-216-089-00	METAL CHIP 47K 5%	1/10W
R408	1-216-093-00	METAL CHIP 68K 5%	1/10W
R409	1-216-089-00	METAL CHIP 47K 5%	1/10W
R410	1-216-089-00	METAL CHIP 47K 5%	1/10W
R411	1-216-089-00	METAL CHIP 47K 5%	1/10W
R412	1-216-089-00	METAL CHIP 47K 5%	1/10W
R413	1-216-089-00	METAL CHIP 47K 5%	1/10W
R414	1-216-089-00	METAL CHIP 47K 5%	1/10W

< SWITCH >

Ref. No.	Part No.	Description	Remark
S401	1-572-184-11	SWITCH, KEYBOARD (⏮ ◀◀)	
S402	1-572-184-11	SWITCH, KEYBOARD (▶▶ ⏭)	
S403	1-572-184-11	SWITCH, KEYBOARD (▷ ❚❚)	
S404	1-572-184-11	SWITCH, KEYBOARD (■)	
S405	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE)	
S406	1-572-184-11	SWITCH, KEYBOARD (EDIT/TIME FADE)	
S407	1-572-184-11	SWITCH, KEYBOARD (CHECK)	

< TRANSFORMER >

Ref. No.	Part No.	Description	Remark
⚠T101	1-450-341-11	TRANSFORMER, POWER	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	
X301	1-577-686-11	VIBRATOR, CRYSTAL (45MHz)	
X401	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

****

Ref. No.	Part No.	Description	Remark
*	1-634-461-11	LOADING BOARD	

****

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN291	1-564-498-11	PIN, CONNECTOR 5P	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

****

MISCELLANEOUS

****

Ref. No.	Part No.	Description	Remark
12	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
13	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
16	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
M101	X-4917-523-3	MOTOR ASSY, SPINDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	
M291	A-4608-362-A	MOTOR (L) ASSY	

****

The components identified by
mark ⚠ or dotted line with mark
⚠ are critical for safety.
Replace only with part number
specified.

9-956-998-81

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Audio Group

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TA-H3700

SONY®
SERVICE MANUAL

AEP Model
UK Model

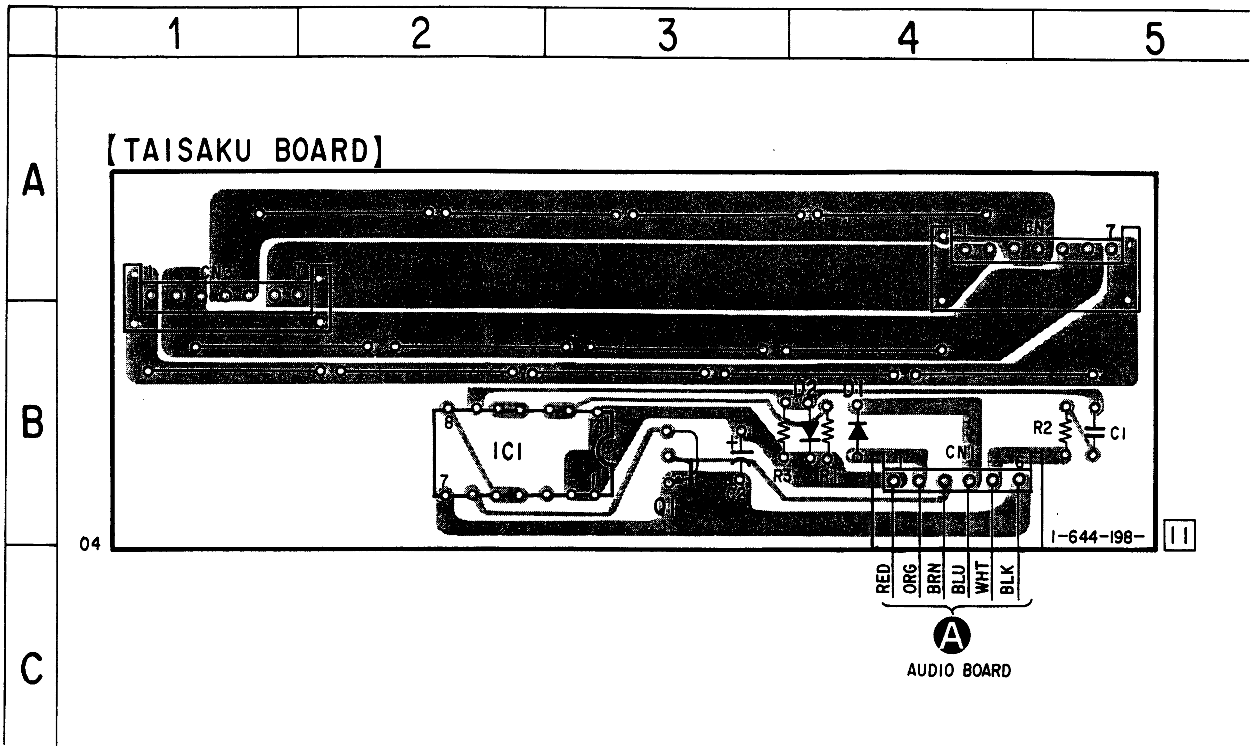
SUPPLEMENT-1

File this supplement with the service manual.

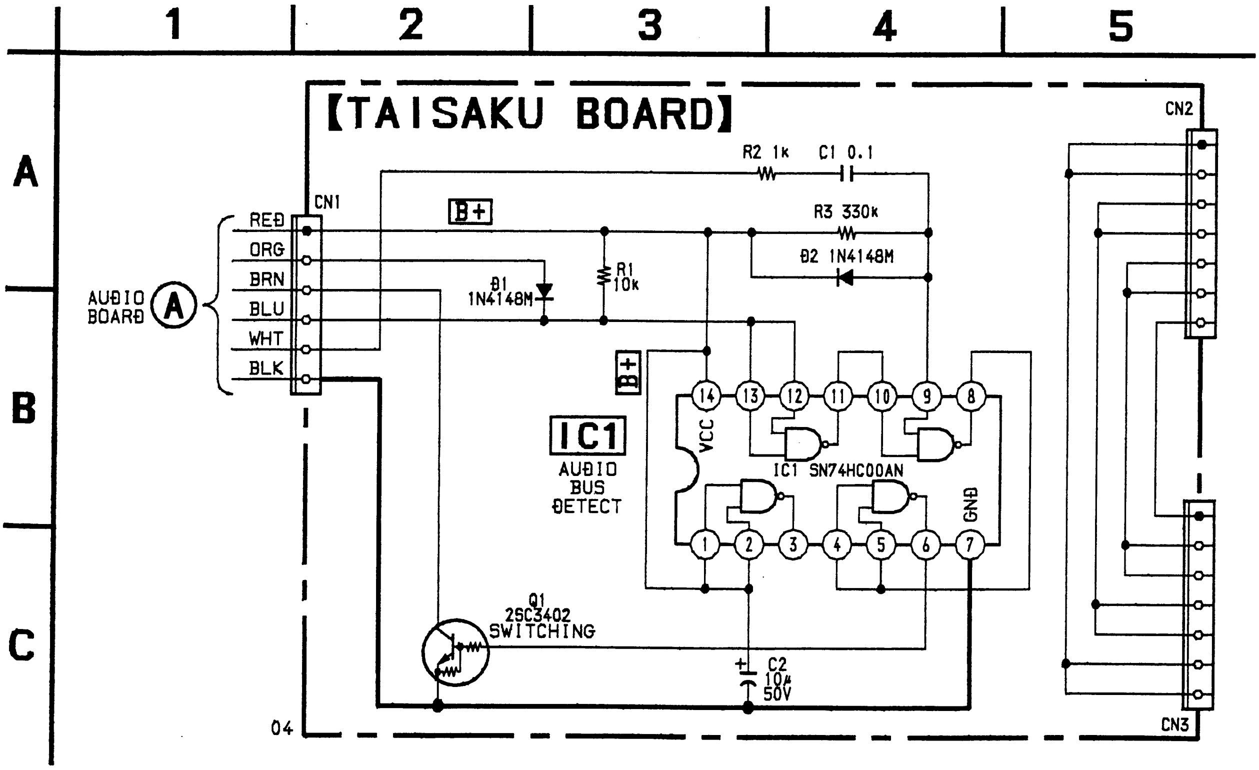
Subject: Add the TAISAKU Board

*This TAISAKU Board correspond to TRANSFORMER (C) BOARD that is showed on the Service Manual.

1. PRINTED WIRING BOARD—TAISAKU SECTION—

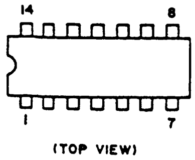

1
2
3
4
5
A
B
C
【TAISAKU BOARD】
IC1
8
7
D2
D1
R2
C1
CN1
R3
R1
Q1
C2
6
04
1-644-198-
11
RED
ORG
BRN
BLU
WHT
BLK
A
AUDIO BOARD

2. SCHEMATIC DIAGRAM—TAISAKU SECTION—

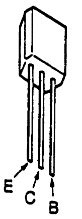

1
2
3
4
5
A
B
C
【TAISAKU BOARD】
CN2
R2 1k
C1 0.1
CN1
RED
ORG
BRN
BLU
WHT
BLK
AUDIO BOARD
A
B+
R3 330k
D2 1N4148M
D1 1N4148M
R1 10k
B+
IC1
AUDIO BUS DETECT
VCC
IC1 SN74HC00AN
GND
Q1 2SC3402 SWITCHING
C2 10μ 50V
04
CN3

3. SEMICONDUCTOR LEAD LAYOUTS

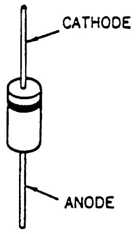
SN74HC00AN


14
8
1
7
(TOP VIEW)

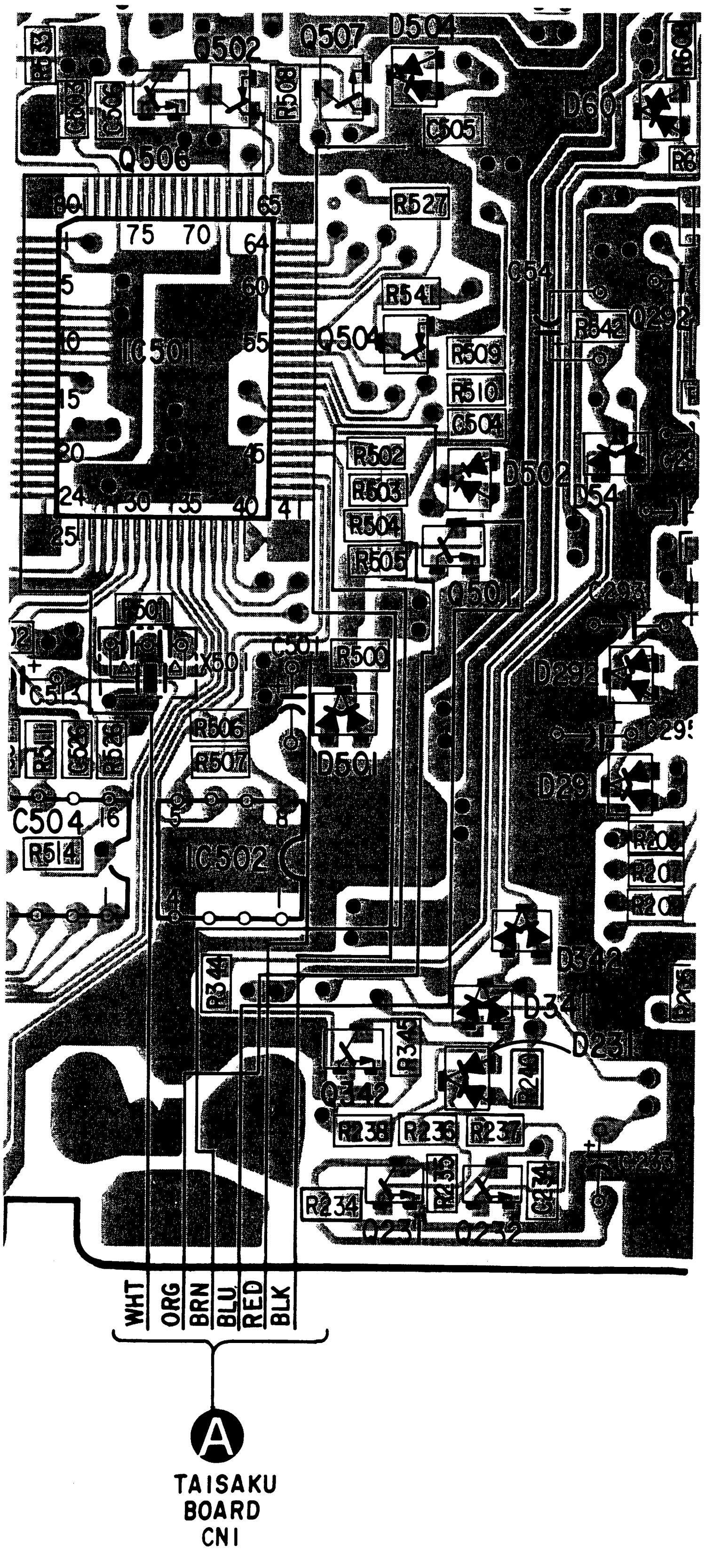
DTC114ES



1N4148M


CATHODE
ANODE

4. PRINTED WIRING BOARD—AUDIO SECTION—


Q502
Q507
D504
Q505
Q506
D60
R508
C503
C506
R527
IC501
75
70
65
64
60
55
45
40
41
1
5
10
15
20
24
25
30
35
R541
Q504
R509
R510
C504
C54
R542
Q292
R502
R503
R504
R505
D502
D54
Q501
C293
C501
R500
D501
X501
C513
R506
R507
D292
D295
D29
C504
R514
IC502
5
8
4
R344
R345
Q342
D342
D34
D251
R238
R236
R237
R234
Q231
Q232
C235
WHT
ORG
BRN
BLU
RED
BLK
A
TAISAKU
BOARD
CNI

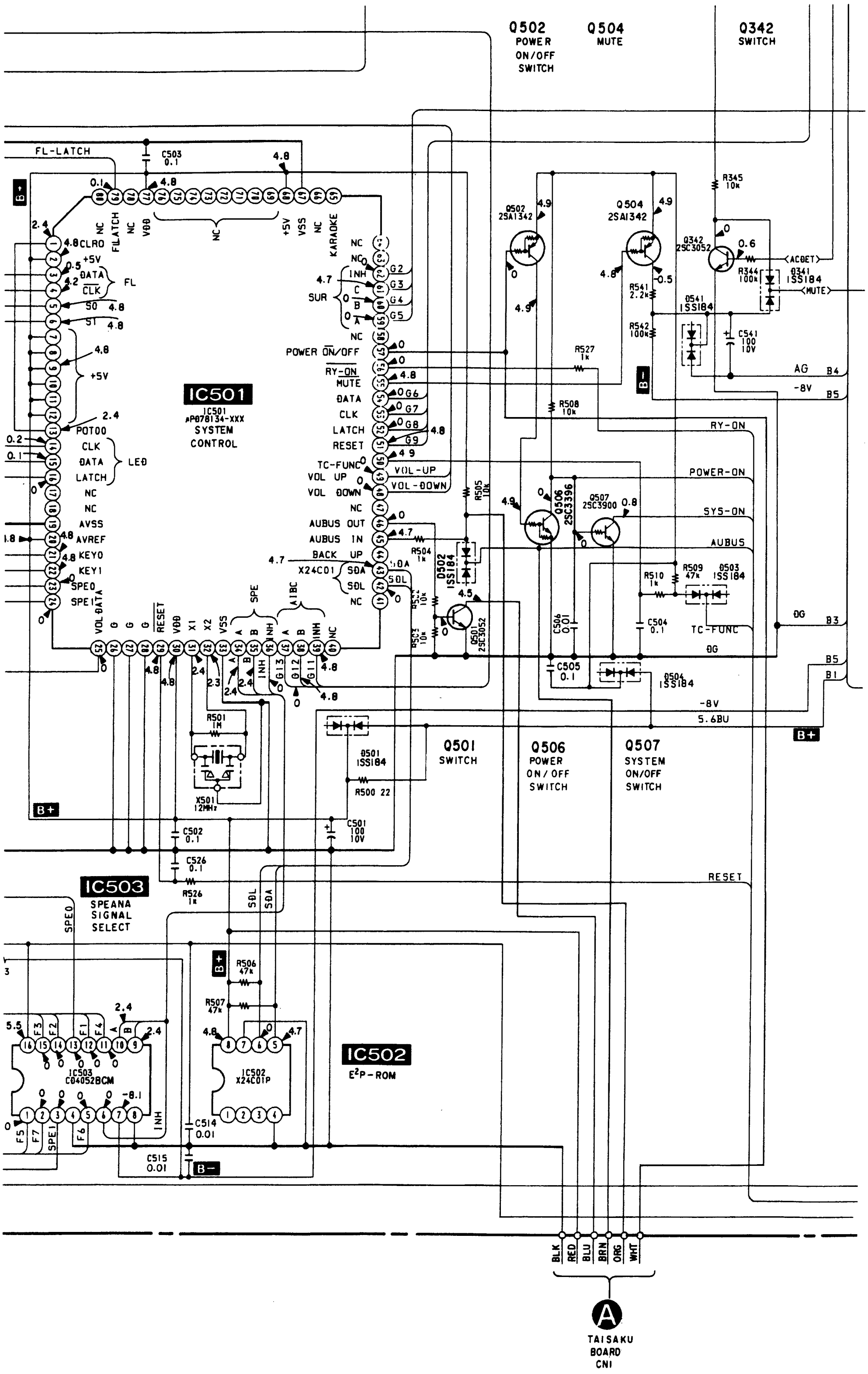
Note on Printed Wiring Board:

- ○— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▨ : Pattern on the side which is seen.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line

5. SCHEMATIC DIAGRAM—AUDIO SECTION—


Q502
POWER ON/OFF SWITCH
Q504
MUTE
Q342
SWITCH
IC501
IC501 μPD78134-XXX
SYSTEM CONTROL
FL-LATCH
C503 0.1
CLRO
+5V
DATA
CLK
FL
S0
S1
+5V
POTOO
CLK
DATA
LATCH
LED
NC
AVSS
AVREF
KEY0
KEY1
SPE0
SPE1
VOL DATA
RESET
VDD
X1
X2
VSS
SPE
AIBC
INH
NC
FLATCH
KARAOKE
SUR
POWER ON/OFF
RY-ON
MUTE
DATA
CLK
LATCH
RESET
TC-FUNC
VOL UP
VOL DOWN
AUBUS OUT
AUBUS IN
BACK UP
X24C01
SDA
SDL
VOL-UP
VOL-DOWN
G2
G3
G4
G5
G6
G7
G8
G9
G11
G12
G13
Q502 2SA1342
Q504 2SA1342
Q342 2SC3052
R345 10k
R344 100k
D341 1SS184
ACDET
MUTE
R541 2.2k
R542 100k
D541 1SS184
C541 100 10V
R527 1k
R508 10k
AG
-8V
B4
B5
RY-ON
POWER-ON
SYS-ON
AUBUS
TC-FUNC
DG
B3
B5
B1
R505 10k
Q506 2SC3396
Q507 2SC3900
R504 1k
D502 1SS184
Q501 2SC3052
R510 1k
R509 47k
D503 1SS184
C506 0.01
C504 0.1
C505 0.1
D504 1SS184
-8V
5.6BU
B+
B-
R501 1M
X501 12MHz
D501 1SS184
R500 22
C501 100 10V
C502 0.1
C526 0.1
R526 1k
RESET
Q501
SWITCH
Q506
POWER ON/OFF SWITCH
Q507
SYSTEM ON/OFF SWITCH
IC503
SPEANA SIGNAL SELECT
IC503 CD4052BCM
F1
F2
F3
F4
F5
F6
F7
SPE0
SPE1
INH
C514 0.01
C515 0.01
R506 47k
R507 47k
SDL
SDA
IC502 X24C01P
IC502
E²P-ROM
BLK
RED
BLU
BRN
ORG
WHT
A
TAISAKU BOARD CN1

TAISAKU

6. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
	A-4347-934-A	MOUNTED PCB, TAISAKU ********************	
		< CAPACITOR >	
C1	1-136-165-00	FILM 0.1uF 5% 50V	
C2	1-124-907-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
CN1	1-564-521-11	PIN, CONNECTOR 6P	
CN2	1-569-493-11	SOCKET, CONNECTOR 7P	
CN3	1-569-493-11	SOCKET, CONNECTOR 7P	
		< DIODE >	
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC1	8-759-916-12	IC SN74HC00AN	
		< TRANSISTOR >	
Q1	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R1	1-249-429-11	CARBON 10K 5% 1/4W	
R2	1-249-417-11	CARBON 1K 5% 1/4W	
R3	1-247-891-00	CARBON 330K 5% 1/4W	

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